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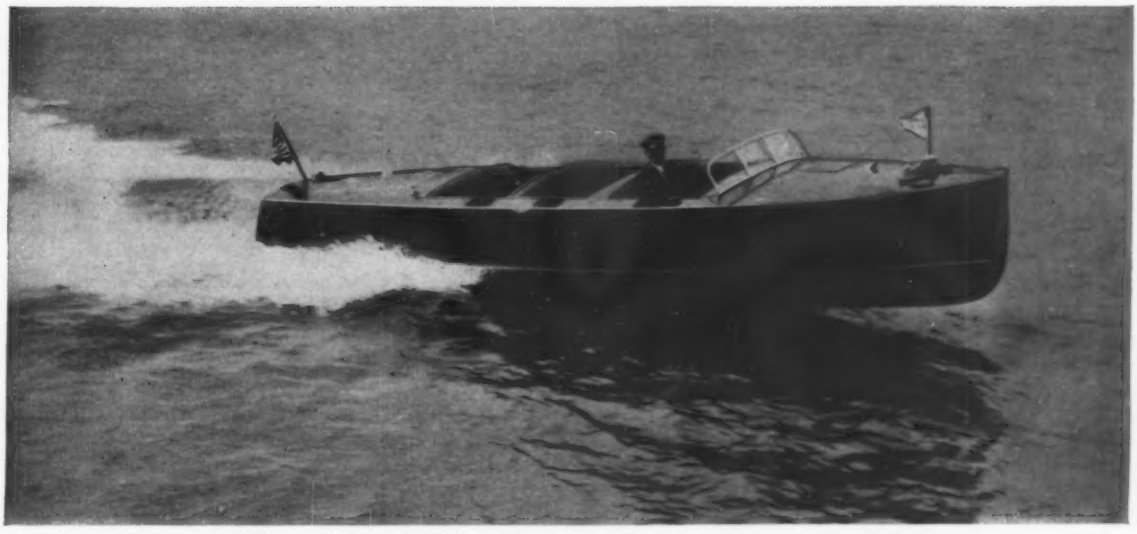
Volume LI JANUARY + 1932 Number I



A high speed, round bilge runabout with a batten to prevent suction effects

Streamlines vs. Speed

How the Modern High Speed Boat has Changed Existing Theory of Hull Design

By GEORGE F. CROUCH

LAST summer, while I was exploring the villages on the shores of one of New England's lovely lakes, I happened upon a little boat yard which was owned by one of the most interesting and vivid personalities I have ever met. Until you have heard him tell in his quaint and forceful language his opinion of designers and naval architects you do not know of how little value they are. In fact, according to him, Noah was the last of them who amounted to anything, for Noah not only designed the Ark but built it with his own hands, and "if you don't build it yourself, you can't do no designing."

Our New England friend has much truth on his side but the thing I notice about men with such an outlook is that they limit their vision to what is directly before their eyes and reject anything which they personally have never seen and tried themselves. He felt so strongly about it that I did not dare tell him I had seen a spline or a weight or a slide rule — and when my slide rule is kept under cover, you may know that I am properly humbled.

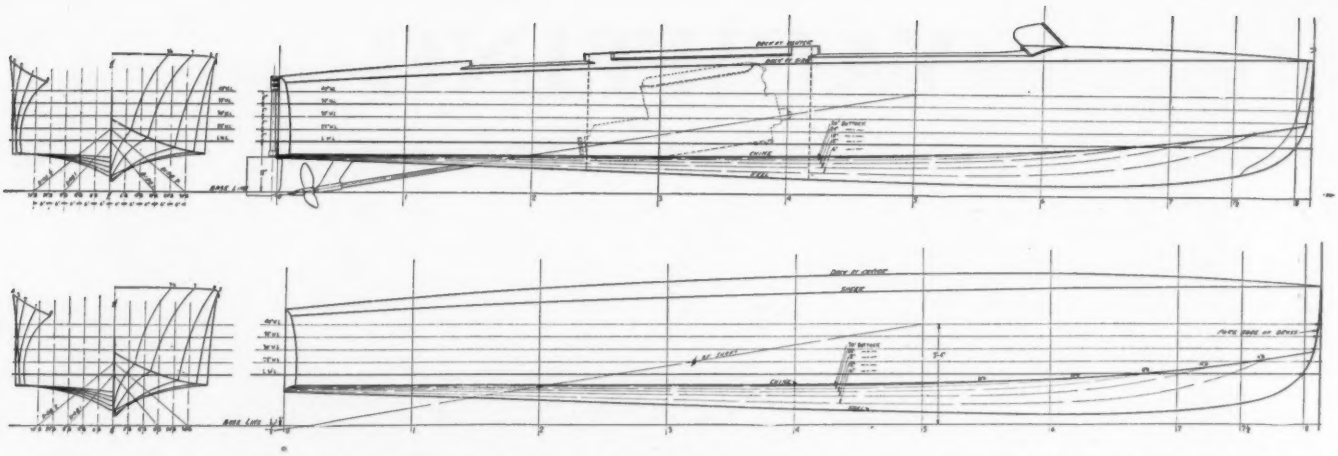
But the boats in the storage shed and the two down at the little dock were even more interesting than the owner of the yard. How many of you have ever seen the old fashioned "speed launch" of thirty years ago? There they were, a full half dozen of them and the queen of them all tied up at the dock, all ready to go. She was just under forty feet long, not quite five feet wide with a bow of incredible fineness even at the deck. Every line in her designed to "cut through the water."

Seeing these old models brought forcibly to my mind the remarkable change that has taken place in the very fundamental principles of hull design for motor driven boats, and how very little change has taken place in the sailing hull. Some of the sailing craft of a quarter century ago look and act as well as if they had come out of the builder's yard only a few months ago.

Upon attempting to analyze this change in motor boat design I find that it all goes back to the fact that the motors used have grown more and more powerful and that, with the advent of more power, the boats have made more speed. To get the best speed which is possible with the increases in power, we have had to depart farther and farther from a true "streamlined" form of bottom until, in the fastest type of racing motor boat, there is not a vestige of streamlining left. This refers to the bottom of the boat, not the part above the water which has no bearing on my argument regarding the bottom, even though it may be of some importance in the actual performance of the boat.

Speed, when talking about boats, must always be considered in connection with size. Here is a vital difference between the car and boat. Wheel base, of itself, has no relation to car speed. But length does have a most vital bearing on the speed of a boat and on the proper form to use to get the speed.

Boat forms change when the speeds change. That ex-

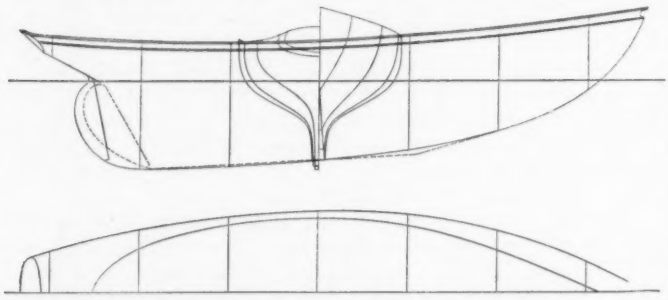


A 34-foot high speed, concave "Vee" runabout. Not a vestige of any streamlines. Note that port and starboard sides are not alike. Port side has more lift to take care of torque of 550 hp. motor

plains why the form of the sailing boat has changed so little. The actual speeds are today just about what they were thirty and more years ago. Of course, changes in the rules under which the boats are raced have brought about minor changes in the overhangs, proportions, shape of sections and the fulness of the garboards, but not a single radical or novel idea has been successfully incorporated in the design of the form.

The idea of judging the speed of a boat not by her actual speed in knots, but by the speed for her size, is of the greatest importance in making any criticism or analysis of the form of a boat. Unfortunately, there is no one particular form of bottom which can be driven at every speed and carry any weight better than any other form. How it would simplify our problems if only there were such a hull form! Then all one need do would be to beg, borrow or steal the lines of that ideal boat and use it again and again. Sometimes I feel that we who design boats are far too prone to consider the problem in exactly that way. We accidentally turn out a fine running hull and then for years we use it in every way we can, for every speed and for all conditions of loading. The average amateur is even worse, for he is apt to attribute the success or failure of a boat to some little and unimportant gadget, or to a combination of them.

It sounds a bit complicated to say that the speeds of two similar boats must be in the ratio of the square roots of their water line lengths if the action and wave formation of the two are to be compared. An illustration will make it much clearer, for it is not as tricky as it sounds. Suppose we have two boats, one 25 and the other 36 feet in length on the water line, similar in model and differing only in size, with the beam, draft and all other dimensions in proportion. The square root of the lengths



A 1902 cruising ketch. The speed of sailing craft is approximately the same as it was thirty years ago. There is no reason why lines should change to any extent unless the speed is different

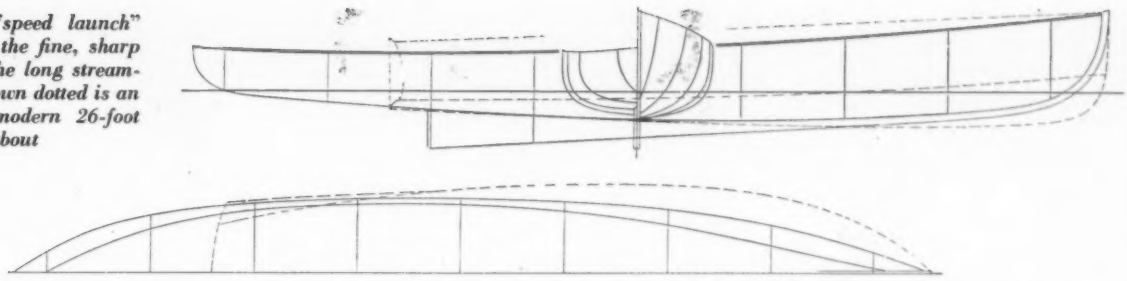
are 5 and 6. And the speeds at which the boats will act similarly must be in the ratio of 5 to 6. If the 25-footer does ten miles an hour, then the 36-foot boat must do twelve in order to make a comparison.

In order to facilitate comparison between boats of varying size the "speed length" coefficient is used. This coefficient is obtained by dividing the speed of the boat by the square root of the water line length. Speeds are taken in knots, and the length is in feet and decimals of a foot. When the 25-foot boat is making 6 knots, the speed length coefficient is $\frac{6}{\sqrt{25}} = \frac{6}{5} = 1.2$. Experience has shown that a speed length coefficient of 1.2 is about the highest we can expect of a hull propelled by sail. In an average sailing breeze it is 1.00 or less. Sailing hulls, therefore, should be designed with this thought clearly in mind and should be given a form which has minimum resistance at a very moderate speed.

I realize that it seems like a lot of theoretical bunk to be writing about the "speed length coefficient." But there is so much pure bunk written and talked about boat forms, and the speed length coefficient is such a basic thing if one is to have an accurate idea of whether or not a form is suitable for its purpose, that the interested amateur should know what it is and should make all his comparisons of speed and shape by it rather than by speed alone.

To illustrate the value of the coefficient in making comparisons, consider a modern stock runabout about 25 feet long and compare it with a "destroyer," the fastest of all our naval vessels. The runabout will do, at best, about 35 knots and the destroyer about 40. The destroyer is 320 feet long and although we think of her as one of the swiftest things afloat her speed length coefficient is $\frac{40}{\sqrt{320}} = \frac{40}{17.9} = 2.23$. The 25-foot runabout would make only 11.15 knots if it had that same coefficient and we would call her a rotten, slow tub. A destroyer with the same speed length coefficient as the runabout really has $\frac{35}{\sqrt{25}} = \frac{35}{5} = 7$ — would have to travel at the preposterous speed of 135.3 knots! That wouldn't be a decimal fraction of a knot more for the destroyer than the 35 knots is for the runabout. Not until power sufficient to make an approach to that speed can be built within the weight limit and then installed in the destroyer can we apply the experience

A 34½-foot "speed launch" of 1902. Note the fine, sharp entrance and the long streamlined stern. Shown dotted is an outline of a modern 26-foot runabout



gained in high speed runabout work to the problems of destroyer design.

In our modern motor boats, even in the cruisers, we are dealing with speeds far beyond the experience of the man who thinks only of large ships and sailing boats and yachts. In fact, the big-ship designer can think much more clearly about a yacht than he can about a motor boat because the speed-length coefficients are about the same in both cases.

Water is curious stuff to deal with under the most favorable conditions. When we try to do things on the surface of the water, where all boats must operate, the action is even more complex. One of the fundamentals which must be clearly kept in mind is that water will not transmit a pull or tension, except through the action of the microscopic surface film which causes surface tension. The only way to move water is to push it, not pull it.

Does that sound as if it were incorrect? We talk glibly about a boat "pulling" a big wave behind her or we say that she "drags a lot of water." What we mean is that the pressure at the stern of the boat has been reduced by its motion through the water and that the pressure of the atmosphere and the action of gravity pushes water from surrounding parts into this region of lowered pressure. Actually, the reduction in pressure acts as a suction or drag on the boat, but it is a pressure difference and not a pull or tension which causes the motion of the water. It is impossible to make the water move faster than the difference in pressure will effect.

It is the same as trying to pump out a deep well with a suction pump. Even if a perfect vacuum could be formed in the suction chamber of the pump, the water could not be lifted more than 34 feet above the level of the water in the well because the pressure of the atmosphere cannot push it up any higher, no matter how much you pump. In practice, the water will not go nearly as high as 34 feet, for the perfect vacuum cannot be obtained nor maintained. Leakage and clearances in the pump, and the gases and vapors given off by the water, prevent it. But by placing the pump down in the water and forcing it up through a pipe it can be pushed as high as desired, limited only by the strength of the materials in the pump, and the power which drives it.

Every properly formed underbody for any boat, no matter how propelled, be it by oars, paddles, sail or power, should be beautifully streamlined if the speed length coefficient is not over 1½. Could any form show sweeter lines than an Indian canoe or an old Viking ship? Since the sailing yacht is in that class it goes without saying that the form should be streamlined to the limit. It should enter the water easily and should be tapered aft to permit the water to close in behind it with a minimum of disturbance. Those who do not appreciate what a boat does when it goes through the water, do not consider the forms mentioned as streamlined forms. They expect to see something like the blunt nosed bodies we have learned to associate with airplanes.

There is not much similarity between the airplane and a boat. The boat runs on the free surface of the medium on which it travels and the airplane is deeply immersed in the air in which it travels. Boats make surface waves and airplanes do not, for there is no surface on which the waves may form. A blunt, full airplane type nose, if used on a boat, would create an enormous

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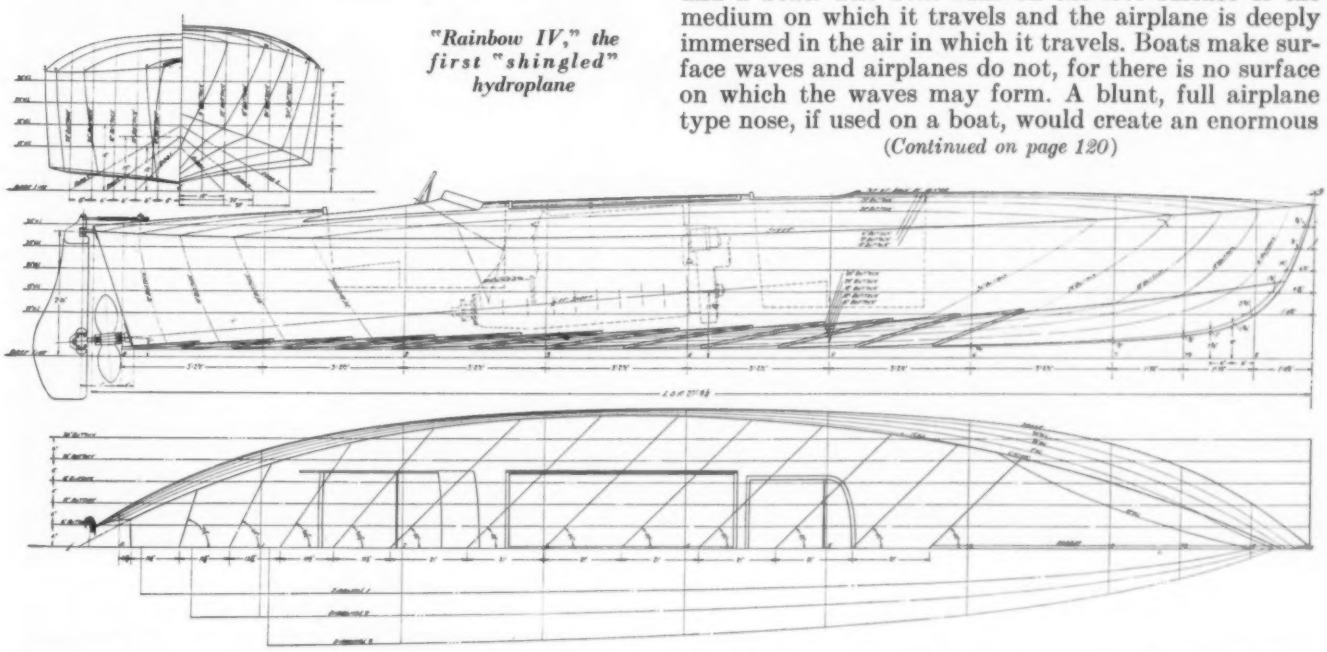
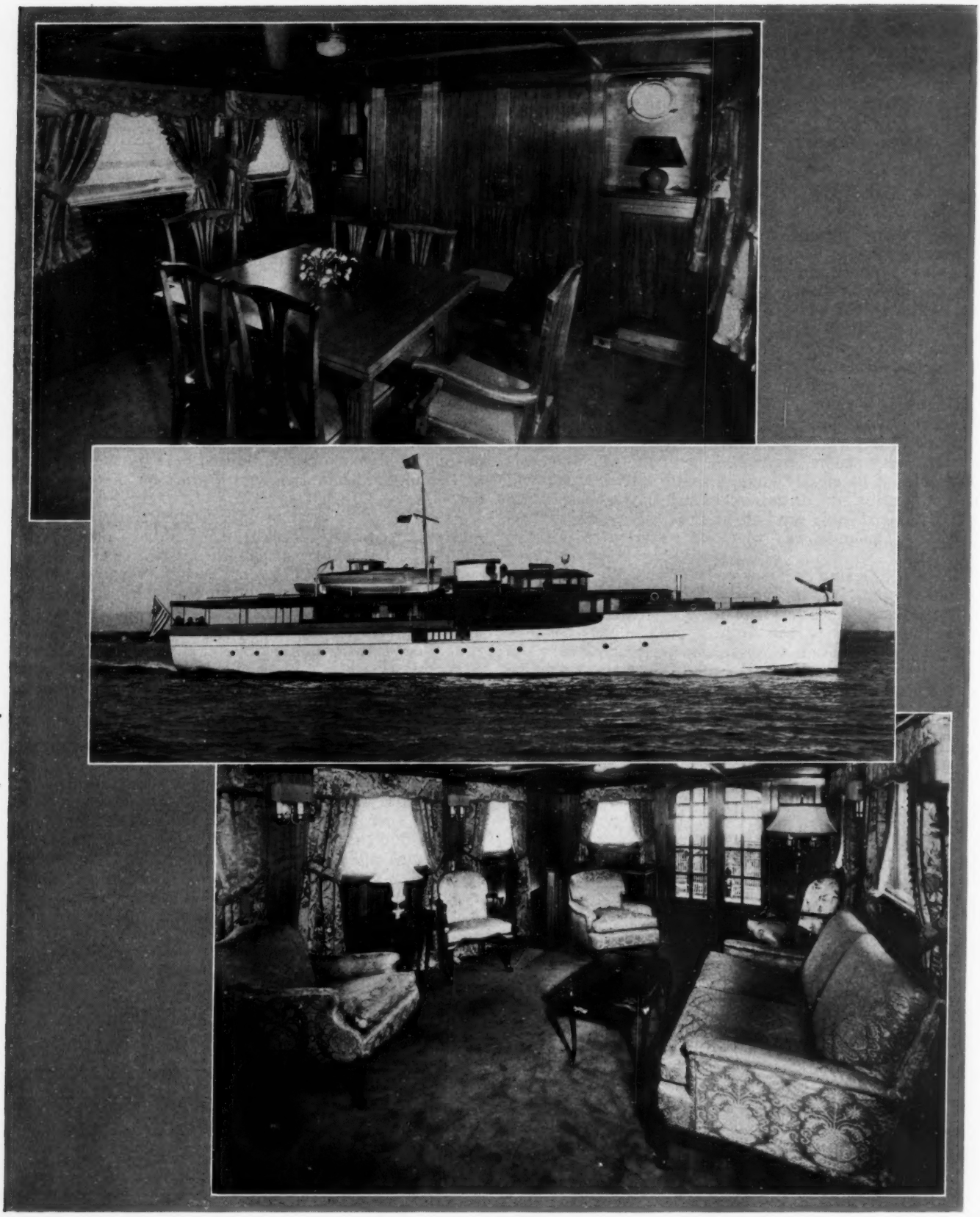
"Rainbow IV," the first "shingled" hydroplane



At low speeds the bottom acts rough and the flow is approximately streamlined. When speed is high the action is that of an extreme hydroplane without a sign of streamline flow



"Sea Owl" + A 100-Foot Diesel + Cruiser-Houseboat

Built for Carter Lupton, of Chattanooga, Tenn., "Sea Owl" is from the designs and yards of the Luders Marine Construction Co. She combines the spaciousness of a houseboat with the trim lines and seaworthy qualities of a cruiser. The dining saloon forward is finished in natural wood paneling and the furnishings are in keeping with the well-lighted room. Wood paneling is carried out in the main saloon as well. Twin Winton Diesels give a cruising speed of 12 knots

"Direction" after she had been repaired in Greenland, where she was badly damaged by going ashore on that inhospitable coast

Starboard Tack

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By

ALFRED F. LOOMIS

A DAY of haze and lazy southerly swells, of sun and calm and of bubbles almost inarticulate as they flowed past our dirty sides. A position off the Jersey shore beyond the line of lightships and unfrequented by coastwise vessels. And a Coast Guard cutter, a little ship of lovely yachty lines, roaming up under one engine to inspect us. My prejudices being what they are, I had never thought to see loveliness in a rum chaser, but there was beauty in this new motor ship, and my eyes lingered on her as she approached.

The chaser's crew came out on deck to look us over, for what they saw would have brought the least interested to the rail — a gray, smeared hull, starboard sheer woefully hogged at the chainplates; a mast cut in a primeval forest, stayed (as if it needed staying) by four shrouds to a side and three forestays; a suit of stretched and stained tan sails, drooping listless in the calm, and a once white spinnaker occasionally filling, weathered Cruising Club pennant wrapped wearily around its crooked staff. In contrast with these evidences of work done and danger somehow escaped, our friends the Coast Guards beheld, as they rounded our pointed stern, two marks of unmistakable artistry — name boards lettered in gold by a master hand.

An officer stepped to a wing of the bridge, enormous megaphone upraised, and asked a seven-word question which not only stilled my instinctive hostility to his tribe, but eloquently revealed the impression we made upon him.

"Do you want us to report you?"

Had we sailed, perhaps, from Tasmania, and wet our decks in the roaring combers of Cape Horn; were we rendered desperate by these last days of September heat and calm; and were we overdue, with our relatives ashore anxiously awaiting word of us? These things might have been, if our picture of dirt and hardship had cut true. But I replied, "No, thank you," and the Coast Guard vessel lazed westward, looking from astern (as all our recent official vessels do) incongruously like a flight of steps.

The fact was that we were the cutter yacht *Direction*, two drifting days out of Philadelphia. She had previously sailed in the icy waters of Greenland, where she was wrecked, and she was now bound for a Long Island port for rehabilitation. Rockwell Kent, who lettered her name boards and cut their feathered arrows, wrote splendidly of her in his book "N x E." Arthur S. Allen, Jr., owned and sailed her to an almost land-locked anchorage near Godhaab, where in the night a gale swept down from glacial mountains and thrust her on the rocks. Then Allen, by the sardonic fate which has pursued no few fearless sailors, was destroyed near home by a speeding motor car and his beloved ship lay weathering ashore in Greenland.

She stayed there two years until Arthur Allen, Sr., to whom the *Direction* is infinitely more than wood and canvas, found passage for her in the steamer *Wagland* from Ivigtut for Philadelphia. In the interim the gaping holes in her ravaged starboard side had been repaired by the benevolent governor of Greenland and she was fit to take the water. But there was no one who would sail her against the westerlies of Davis Strait, and except for the cargo of kryolite, which takes the *Wagland* occasionally to Greenland, *Direction* might never have come home. Home she was, or nearly so, when I reported aboard in the Delaware River to sail her to New York.

Ruggedly built by an amateur for a cruise to the South Pacific and then bought and built even more strongly by Mr. Allen for his son's voyage of exploration to Greenland, *Direction's* windward qualities are small. And as my latter experience in sailing has been in a windward worker she challenged me. I wanted to see how she would point, how she would sail, and how she would stand up in a breeze of wind — the while I prayed for a fair slant between Philadelphia and New York. Mr. Allen is the kind of man for whom people do things willingly and gladly, but I lay no claim to a spirit of altruism in volunteering my services. I wanted to see *Direction* at work.

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This famous cutter arrived at the Pennsylvania Salt Company's dock on September 2nd, was unloaded, passed speedily through customs, and towed to the Kensington shipyard, three miles up the river. I don't know how many years it is since this yard had harbored a sail boat, and a yacht at that, but there are men there who know and love a windjammer. How they worked! Many of *Direction's* furnishings had been sucked out of

her by greedy breakers in the Greenland harbor, and in the work of reparation the starboard side of her interior had been stripped. Lockers gone and bulkheads missing, bunks and chart table gone. Shipmate stove in place to port but rusted beyond use; port water tank stove in, but starboard tank intact. Lamps, binnacle, and even her anchors bent and battered. Running rigging and lanyards for her shrouds weathered far beyond the point of safety. Decks dirty and interior filthy.

But by the time I reached her on September 8th she was (despite the intervening Saturday, Sunday, and Labor Day) liveable and sailable. Her running rigging and her lanyards were newly rove off, her lamps were dentless and filled with oil; a new stove replaced the old one; bunks and mattresses were in the final stages of manufacture; and quick-drying paint cleaned and brightened her deck and cabin. Mr. Allen bought a lap-streak dinghy for a song, a department store turned itself inside out to equip him quickly with ice box, blankets and galley utensils; a grocer delivered canned and fresh stores almost before we left his shop. And at three o'clock of September 9th, riggers, carpenters, and officers of the yard left her as a motor tug came up to tow *Direction* down the narrow reaches of the river.

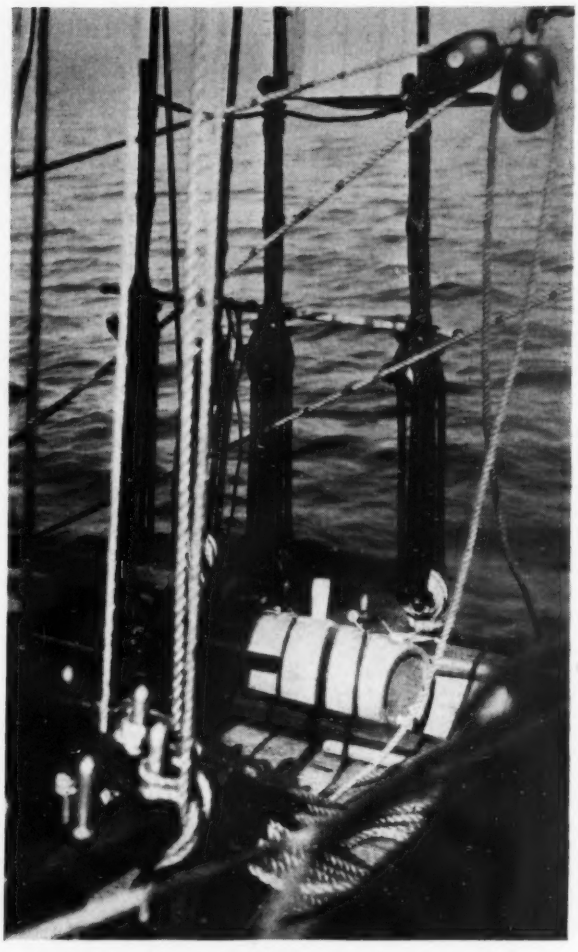
I admit that I was aghast when I saw how this 33-foot over all cutter was built and rigged. Her beam is 11 feet — one in three — and our new 9½-foot cedar dinghy stowed as comfortably between bulwarks forward of the mast as if it had been built to order. Her bowsprit is sheathed with metal, secured beneath with two half-inch galvanized chain bobstays, and against side whip by double half-inch wire stays. The mast is a solid spar, nine inches in diameter at the deck and not more than 36 feet tall. The shrouds, three to a side leading from the hounds, are of ⅝-inch wire, with topmast shrouds and backstays of only slightly less diameter.* The fore-stay is heavier than any, and there are jibstay and flying jibstay as well. To set up the rigging, tarred Italian hemp of 1¼-inch circumference reeves through four-inch deadeyes. Any item of this standing gear would be suitable, correspondingly, for a 70-footer, and any single shroud or stay would support *Direction's* gargantuan mast until the hinges of hell blew off.

Running rigging. I had never thought to sail with running parts that were hemp throughout — but so *Direction* is rigged, sheets, halliards, topping lift, and backstay runners. The main throat and peak halliards and the jumbo halliards, as well as the main sheet, are of two-inch stuff, but the main sheet blocks are sheaved for still larger rope. Even the flag halliards, hemp that they are, could be used for towing *Direction* in sheltered water. I love hemp for its strength, and once my hands are toughened I don't mind the feel of it; but when it is wet and stiff and kinky as nigger wool I don't want ever again to be shipmates with it.

Direction's hull is double-ended, and her keel, with 7500 pounds of iron on it, is long and straight. I don't know the siding and molding of her ribs, but they are proportionate to the other dimensions. They had to be heavy to withstand two days of scrunching on those rocks in Greenland. If a boat has a destiny (as I believe) this massive hull was built to be wrecked. By which I mean that no boat less strongly planked and timbered could have resisted the pounding of those northern seas. She invited it. And yet there is also bulk without strength. Bilge stringers and sheer clamps of heavy oak are butted end to end without scarphing. If diagonal strapping was used in her construction it does not show and certainly it did not keep the heavy whipping of her mast from hogging her sheer.

Yet, again, here was *Direction*, survivor of an experience that would have splintered frailer craft, hardly leaking ten gallons a day, and once more ready for the chances of the sea.

* For purposes of comparison, my own cutter *Hotspur*, of identical length, and considered by experts over-rigged, has three shrouds to a side, the heaviest wire used in staying her 40-foot hollow mast being of 5/16″ diameter.



Deadeyes and lanyards held the shrouds — none of your new-fangled stuff on "Direction"

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I had arranged with my brother-in-law, Joe Burge, who is not a sailor, and with one other, who is superbly one, to ship with me, and had asked them to report aboard at three. Before the hour Joe showed up, jovial and glad of the opportunity to quit the city's streets and peel off garments to the minimum exacted by Philadelphia's Committee of Safety. But where was the other man?

A call to New York found him at his desk. He was tremendously sorry, but he had clean forgotten his promise to sail with me, and anyway he was too busy. I don't often ring off in the middle of a word, but for once I gave myself that pleasure. I called Findlay Downs, rear commodore of the Corinthian Yacht Club of Philadelphia, and poured into his sympathetic ear a red hot tale of woe. He promised to find the necessary third man, amateur or professional, and asked me and Joe to be his guests for the night at the clubhouse in Essington. I thanked him and accepted — for there are mosquitoes over the Delaware — and returned to *Direction*.

"We'll shove off," said I, "but I'll take no chances with a strange boat and we'll tow the ten miles to Essington. Goodbye to you all." And to my defaulting sailor friend I mentally consigned a sailor's farewell, for he had certainly let me down.

Our motor tug drew six feet. I mention this unimpressive fact for the reason that if she had drawn less than *Direction* we would have parted her towline on Horseshoe Shoal, while if she had drawn more we would have poked our bowsprit through the rear window of her pilot house. But, both drawing the same, we both grounded together and, luckily, both bumped clear without damage. With a fair tide there was no other incident on the tow to Essington where at 5:30 the tug delivered us to the mercies of the mosquitoes.

Joe and I stopped aboard only long enough for a change of clothes and a couple of cups of milk — wonderfully refreshing after a hard day, the alcoholic secretions of the Pennsylvania kine — and repaired ashore in the Corinthian's club launch. The rear commodore was there to greet us and to give us the club in the way they have at Essington, and two friends of his took us up to a room where in the wicked era an oak table used to feel the delicate caress of whiskey glasses. Ho hum, the good old days!

We were late to dinner, but not too late to interview Pete Christianson who took a chance and signed on for our voyage of discovery. Pete's last yacht had been sold beneath his feet, as it were, and he was temporarily out of a job — so I took advantage of his adversity to inform him that while underway he would cook, whether or not he could.

The tiller was a ponderous stick

There may possibly be more hospitable clubs than the Philadelphia Corinthian, but I have never before arisen after a night spent dreamlessly beneath mosquito bar to be informed that the club launch would tow us to that point at which the wind would fill our sails on an easy reach. Such was our good fortune, and against a flood tide we towed twenty miles to New Castle, where a gentle southwesterly rippled the Delaware and our course lay southeast. We took on stores at New Castle — for Pete, being an ex-deepwater man, is a great believer in bread and potatoes — and then, just below the town, we raised sail and let go our line. God knows how many days the tow had saved us. Though *Direction* has no motor, we were now independent.

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In mapping out this cruise I had allotted, roughly, two days for the jaunt down the Delaware, two for a reach across to the easterly end of Long Island, and one for a run up the Sound to Cold Spring Harbor. For, in the incurably optimistic way that the cruising gentry have, I reckoned on a brisk sou'wester while we were at sea and a hard easterly after we had rounded Montauk Point. But I did take other considerations into calculation and before bidding Mr. Allen goodbye I had informed him that if we were headed halfway to Montauk I would run for Ambrose Channel and enter the Sound the western way. That, I told him, would mean an expensive tow through Hell Gate, which I hoped to avoid by going east-about.

As we let go our tow line I saw no evidences of the hard wind that was expected to blow us down the river and out to Montauk. I was a little surprised to see, however, that as we fell away on the starboard tack we took a very sharp heel.

"I thought she'd be a stiff boat," said Pete, "and here her rail's almost under."

"It's the stores and stove and what not on her port side," said I, "and don't forget the weight of her mast and rigging. Also the gaff."

We looked at the gaff, a ponderous stick, almost untapered, and concluded that it was at least twice too heavy.

"I guess," said Pete, "she's one of them bruisers that lays down just so far at a breath of air and don't go beyond that."

"Here's hoping."

We had a favoring tide by this, and, though the breeze momentarily lessened, made fair time for three hours. To weather Stony Point Shoal we had to sail her pretty close-hauled and I was amazed to see by bearings on the shore how the boat was sagging off to leeward.

Pete, who had already blossomed as a monologuist, remarked, "Looks like she's one of those two-way boats — makes as much leeway as headway."

But the current slipped us around the curve in the river and we eased sheets for the reach down Liston range. After which the tide turned and the wind faded still more, so that in the first four hours of the night we progressed only four miles. Even this was better than anchoring, and the business of sailing kept one of us on deck to entice the mosquitoes away from the sleeping watch below. The ebb of the tide brought strength to the wind and morning saw us off Brandywine Shoal, still on the starboard tack. Six hours of holding our own while the current surged up the entrance to the Delaware, and after that a chance over the tip of the Overfalls, confident that the now outgoing stream would keep us off the shallow spots shoreward. At three in the afternoon, when we had the moan of McCries Shoal

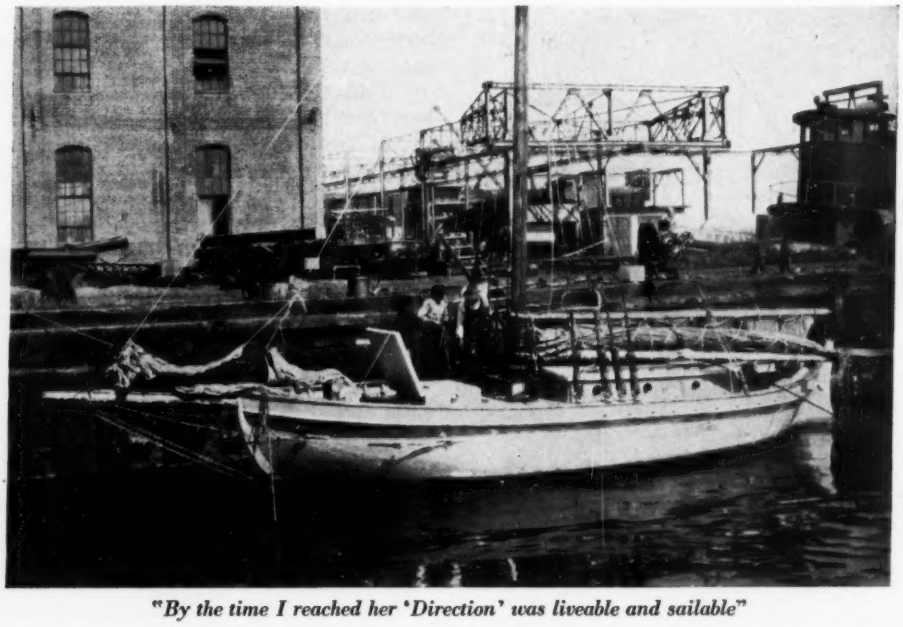
buoy well abaft our starboard beam, I figured that we had come fifty miles in our first 24 hours of sailing. Put down ten miles of that as preponderance of ebb over flood tide, and twenty more to the use of the spinnaker, and the remainder was what *Direction's* working sails had been able to wrest from the light southwesterly.

By this time, with plenty of sea room about us, and a surprisingly quick grasp of the technique of compass steering, Joe was able to stand a watch alone, and the night passed quickly. Not so *Direction.* In the morning we were not much more than ten miles beyond Northeast End Lightship, and I had begun to think that a course for the New York entrance would be advisable.

The Coast Guard cutter looked us over just before a new slant came in. It was from the northeast. We took in the spinnaker and after a try at sailing *Direction* close-hauled and a glance astern at our wake, my change in plans crystallized. We started sheets on a course of north by west and made for Sandy Hook.

That was quite a pleasant little breeze of ten knots, but accompanied by a sea which showed either that it had blown harder to windward or was about to blow harder where we were. The former proved to have been the case. Our rail went in often enough to fill a bucket that had been lashed on deck at the lee rigging. I wondered how much stiffer we would be on the port tack, but we never left the starboard.

What's a day more or less when sailing such a boat as this in light airs? Sunday noon, four days out of Kensington, saw us drifting aimlessly across Gedney Channel in New York's lower harbor. The northeasterly had been succeeded by a southerly calm and in the last of the slack before the outgoing tide we unlashed the oars from the cabinhouse and rowed out of the channel to find anchorage.



"By the time I reached her 'Direction' was liveable and sailable"

I had made my plans, and as plans should be, they were flexible. If there was little wind at the turn of the tide we would drift in to Gravesend Bay and anchor. Then Joe and I would go by train to Cold Spring and return with my own boat to tow *Direction* through the harbor. But if there was a little wind we would carry on to an anchorage off East 26th Street. If there was a strong fair wind and we had also a fair tide, we would sail through Hell Gate. But this last was a remote possibility and one that I would have dismissed from consideration if Pete had not already shown himself to be a resourceful and willing sailor.

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A wind came in at three and I awoke from a nap to find Pete getting the anchor aboard and *Direction* making faint headway against the tide. Momentarily the wind strengthened from south southeast and by the time we had set the spinnaker (again to starboard) we were doing better than a mile an hour over the ground. The buoys showed us our speed, for the wind had swept a heavy fog in from the sea and we were displaying more than usual interest in buoys. Pete would have unmade the port anchor but I told him to leave it ready for instant use and to have the 20-fathom hemp hawser clear for running. However foolish you may think me in what follows, give me credit for this grain of foresight.

We dodged between bellowing steamers across Ambrose Channel and on the chart I ticked off the buoys as they came. At number 12 we sighted close aboard in the fog a yawl under power and a motor boat, seemingly directionless. But once they saw *Direction,* they followed us like dogs at heel. When, in answer to a steamer's whistle, I blew three blasts on our fog horn to show that we were a sail boat running free, the motor boat followed suit. Some minutes later, when another motor boat wrested its silhouette from the enveloping fog, the first asked the new arrival where the first was bound.

"Your course will take you to Fort Hamilton," answered the second motor boat.

"But we want to go to Sea Gate," said the first.

"Then follow me," said the second, and they faded away, yawl and all, off our starboard beam.

I sneered the sneer that I reserve for certain occasions, forgetting, for the moment, that such condescension is usually succeeded by the retribution it deserves. At buoy 14 we jibed over—our first and only adventure on the port tack—but when the struck bell on the ammunition dump off Fort Lafayette warned us that we were about to blow up the island we jibed back again. Here the flood tide caught us up, and just beyond, the fog scaled off. Over Jersey way the horns and whistles still blared warningly, but we entered the upper bay in a slanting flood of sunshine.

As our course through the anchored steamships in the Bay Ridge middle ground took us a little east of north, the wind hauled to south of west and I commenced to feel exhilarated. Once before I had sailed a boat that would not go to windward and on that occasion, in 2000 miles of cruising, the wind had nearly always been abaft the beam. And here was *Direction,* four days underway, sailing one tack, never close-hauled, and now with the wind obligingly shifting as our course changed. Who said there were any perils in Hell Gate?

(*Continued on page 134*)

Photos by A .V. Ragusin

The Gulf of Mexico offers fair winds and smooth waters for winter cruising

Consider the Gulf Coast . . .

A Thousand Miles of Cruising Paradise Invite the Northern Yachtsman

By VAL J. FLANAGAN, JR.

THE Gulf Coast is a new mecca for the northern yachtsman. Though it has not been an unusual sight to see trim sail and power yachts from northern ports anchored at New Orleans, Biloxi, Mobile, or other Gulf ports, within the past two years cruising in Gulf Coast waters has gained a great impetus and the increase in the number of visiting yachts has been marked.

From the coast of Florida, on the east, to Corpus Christi, Texas, on the west, the Gulf Coast lies stretched in a great half-circle. As a cruising ground its possibilities are limitless. But before the boat owner decides to invade new waters for a holiday, he wishes, naturally, to know something of the character of the region and what he may expect to find. Let us consider, then, what the Gulf Coast has to offer.

There is picturesque scenery along its coastline. Here is evergreen, semi-tropical growth; colorful blooms; moss-hung live oaks; stately pine groves; palms. The long beaches are of a silvery whiteness. Oleanders grow to the very water's edge, and pelicans are seen in great flocks. There are quaint little towns to intrigue the visitor, and the cities are well kept.

The yachtsman visiting the Gulf Coast will find a favorable climate with every facility for the enjoyment of vacation days in the open; waters that are not too chilling should one fall overboard; and an "atmosphere" which recalls enthralling stories of adventure enacted when these tide-washed shores were peopled by Conquistadores from Spain, explorers from France, bold buccaneers, and pious fathers who came to take possession, under the cross, of this wild region.

Lying offshore is a line of islands forming the outer bulwark of the Sound. In these protected, shallow waters there are ideal yachting courses, and the many bays and bayous offer still more secure anchorage. The bottom is soft; sometimes mud, and more often sand. You may run aground, as a matter of course, and back off just as easily. Once in a while you may bend a propeller, but no oftener than in other parts of the country. Many of the municipalities have docks and wharves, both private and public, where one may tie up close to supplies. In most cases, there is no charge for wharfage.

Biloxi Harbor with its picturesque fleet of fishing schooners

There is fishing everywhere. Along the shell keys paralleling the shore the dashing tarpon beats his way. The hard-fighting shark, the stubborn jackfish, the redfish, the sheepshead, the Spanish mackerel, the striped bass, the red snapper, the jewfish, the pompano and many other game fish challenge the skill of the angler. In the bays are found the redfish and sheeps-

A vista through moss-covered trees. Along the waterfront at Biloxi in midwinter

Northern yachts in increasing numbers are discovering the colorful harbors of the Gulf Coast

head, especially during the winter months, while in the cool depths of nearby fresh water streams lurk the battling black bass, the sweet-fleshed perch and the beautiful sac-a-lait.

Mississippi and Alabama upland, the scene of numerous field trials each winter, offer prime shooting for quail, snipe, woodcock and dove, while the Louisiana marsh is well known as an El Dorado of duck and geese hunters. Experienced guides for both hunting and fishing are available, and associations of commerce will make arrangements for trips and secure accommodations at hunt clubs. The State of Louisiana maintains a public duck hunting club on the Mississippi River, at Pass a l'Outre, and there yachts can head right up to the wharf.

The racing yachtsman will find plenty of competition. There is always a good racing breeze as well as fine courses for power craft, and Southern yachtsmen, the visitor will find, are eager for outside competition. The Southern Yacht Club of New Orleans, the second oldest yacht club in the United States, sponsors races the year 'round, and sail boats are never hauled out at any of the yacht clubs.

Untold miles of navigable waters make cruising a delight. The choice is wide — trips to the outlying islands, up the picturesque bays, and quiet rivers and bayous. There is nothing which wins a man to cruising more than the discovery of little harbors, secluded and inviting. For many, a bayou has a particular fascination. The word itself suggests mystery, romance. One imagines hordes of Indians hovering in the bayous ready to swoop out upon the unsuspecting enemy, or perhaps some lone, daring pioneer. Vivid imagining, perhaps, but a thing as necessary for a successful cruise as an anchor. With the one you are held securely to this earth; with the other you can soar into the realms of romance and adventure.

To reach the Gulf Coast several routes offer easy transportation. The river route from the Great Lakes to New Orleans and beyond is well known to yachtsmen of the Middle West. There are routes from Pittsburgh and Ohio cities to New Orleans; and from St. Paul, Kansas City, Sioux City, all converging in the Mississippi. The channel southward is marked like a hard road, and the boatman should encounter no difficulty if he carries a light list and pilot book. If he wishes to play doubly safe, it is possible to secure a tow behind the barge trains operated by the Federal Barge Lines for a fee as low as ten cents per mile.

There is an inside route down the Atlantic Coast via Key West with little necessity for leaving inland water courses. Any yachtsman can lay out a course with the aid of the government's Inside Route Pilots, New York to Key West, and Key West to New Orleans. Charts covering the Gulf Coast waters will also be needed. These are all listed in the U. S. Coast and Geodetic Survey catalog.

Since, in all probability, the yachtsman has already visited the west coast of Florida, there is no need to outline a trip through these waters. At Pensacola three hundred square miles of land-locked water offers endless possibilities. There is Pensacola Bay, Escambia Bay and East Bay, Bayous Texar and Chico, and picturesque Santa Rosa Sound — the bluest of water and a beautiful

green shore line. From Pensacola it is less than fifty miles to Mobile, port of call for merchantmen from every maritime nation. This historic city boasts of two yacht clubs, the new Buccaneer organization on the west shore of the bay, and the old Mobile Yacht Club, at Fairhope, on the east side. Here is a region inviting "exploration" — the Dog, Mobile, Tenesaw and Fish Rivers; Dauphin Island, Fort Morgan and Fort Gaines, where the Alabama deep sea fishing rodeo is held annually; Bon Secour Bay, and Bayou LaBatre.

Leaving Mobile, the course leads westward to Biloxi. Long, low-lying islands, with high sand dunes and tall pines, mark the passage down the sound. In Biloxi the boatman may cruise in the placid waters of the sound and Back Bay, which are dotted with fishing schooners. He can explore the waters of the Tchouticabouffa and Biloxi Rivers, with their high, red-clay, tree-topped bluffs, as well as Fort Bayou and Bayou Bernard. He can wander ashore among giant oaks and magnolias and find winter roses and scarlet hibiscus flaming along the fences.

It is advisable to use Biloxi as a base for prowling among the outlying islands, as they are readily accessible from Biloxi and there are safe harbors on the lee side. These desolate islands, stretching west to east from eight to twelve miles offshore, are a fascinating hunting ground for the fisherman, naturalist, photographer, geologist, curio hunter, or history student. Ship Island, where General Packenham made his rendezvous before the Battle of New Orleans, holds, perhaps, the greatest interest. Here gold is supposedly buried, and is the object of many searching parties. The Goose Point Tarpon Club, not far from the famous "Tarpon Hole," is situated on Cat Island.

Along the coast from Biloxi to New Orleans a line of beacons makes the going easy. At Gulfport ocean-going vessels outline themselves against the sky. Next is beautiful Pass Christian, the scene of numerous yacht races and the base for an annual tarpon rodeo, and then comes Bay St. Louis, a quiet, pretty little town, situated on a bay, that affords safe anchorage and gives access to the beauties of the Wolf and Jordon Rivers, and Bayou Portage.

From Mississippi Sound we enter the Rigolets, deep water passage into Lake Pontchartrain, and steer through one of the draws of the great Pontchartrain Bridge. A few miles farther looms the Southern Yacht Club house, and a snug harbor in the yacht club pen, the New Basin Canal or Bayou St. John, is in prospect. In New Orleans the visitor is transported into another world. The Creole customs, the people and architecture of the Vieux Carre, with its overhanging balconies, its patios, and its narrow streets, conspire to give an atmosphere unlike that of any other of our cities.

But to continue on our way. For the westward leg there are two routes, one via the Intra-coastal Canal, a route partly inland, and the "outside" passage along the highly configurated coastline of Louisiana. The former is the more desirable. Passing from Lake Pontchartrain through the Industrial Canal into the Mississippi River, and through Harvey's Canal locks the Barataria section is reached. This is a region of somnolent bayous, decorated with ancient oaks adrip with Spanish moss, a marsh country famed for hunting. It will be worth while to visit Grand Isle — a fertile half-tropical strip of land sixty miles from New Orleans.

Next comes the Atchafalaya River. The natives call it the "Chaff-a-lye." Up the Atchafalaya is the mouth of the Bayou Teche, the stream made famous by Longfellow's "Evangeline." It is passable for small craft for a number of miles — to St. Martinville and New Iberia.

After leaving Louisiana, Sabine Light is soon raised. Port Arthur and Beaumont follow, and then Galveston, a beautiful playground and a seaport. The Houston Ship Channel brings the cruiser to the metropolis of South Texas and to the Galveston Bay country. Pushing on to Corpus Christi, the boatman finds more cruising waters. Here are numerous bays, and near by is Pass Aransas, noted for its deep water fishing. Beyond is Point Isabel, and beyond that lies Mexico and Central America.

The "pen" of the Southern Yacht Club of New Orleans, which gives priority only to the New York Yacht Club in point of age

A general view of the Salon Nautique, held in Paris last November. Auxiliaries and sailing craft were prominently displayed alongside of engines, runabouts, and cruisers

The Paris Salon Nautique

By L. LUARD

THERE seems to be no doubt that the exhibition, held annually in the Grand Palais, has come to stay. This is its sixth successive year; and as builders, manufacturers, and designers are not philanthropists but perspicacious gentlemen, the appearance of the usual exhibitors, and of several others, in these times of economic stress, speaks well for the results already achieved and augurs just as well for the future.

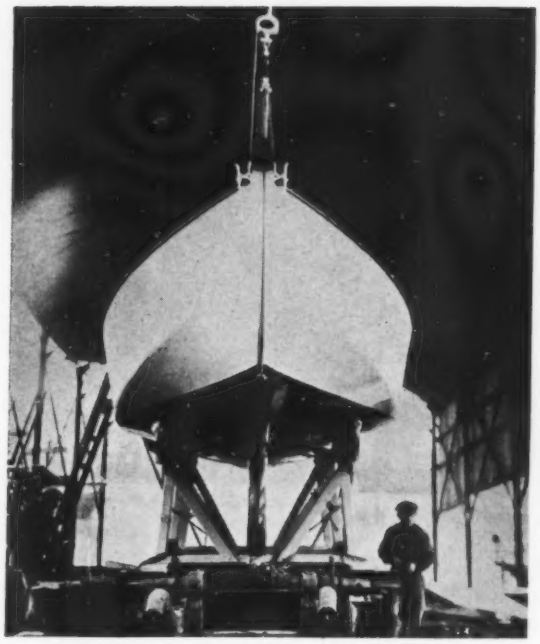
The Grand Palais is an ideal place for showing boats to the best advantage. There is plenty of room and, more important still, plenty of light; and the stands seemed so arranged this year that the larger exhibits, without being in any way ostentatious, formed, as it were, a pivot around which the smaller displays were offset.

The smallest cruiser at the show was this 20-footer, "Golden Dawn." A British built craft, she was the product of Thornycroft

More sailing craft were displayed than in former years — twenty-one boats in all, counting one-designs; but the number of motor cruisers had decreased, though several types of speed boats were still in evidence. This seemed strange, for the power craft were always centers of attraction — and business, I understand, was satisfactory. In sail, however, most cruisers in France are still designed more with an eye to comfort and commodious accommodation than to performance — especially to windward. There are signs, however, of a change of ideas; and one year a really fast, able boat will be exhibited with as much comfort below decks as her slower forerunners possessed.

The Chantiers de la Liane, of Boulogne, again took pride of place for size with a 12-ton 40-foot cutter of standard design. This yacht was very similar to the yawl they exhibited last year. Classed "A-1" at Lloyd's, she was strongly built (double oak frames alternating with three steamed ones; heavy shelf and bilge stringer; ample hanging and lodging knees), and well finished. Her underwater planking was of oak — very popular in France; topsides of pitch-pine; decks of Oregon pine — well laid in narrow planks and properly nibbed in.

NOTE: In view of the approaching Motor Boat Show in New York, this survey of the recent Salon Nautique held in Paris should prove of interest in showing the trend in boat and engine design abroad. American-built runabouts, engines and outboards seem popular in France, and the products of many of our leading manufacturers were prominently displayed at the exhibition. The fact that the show was held in the autumn rather than in the winter should give us on this side of the Atlantic something to consider in the matter of the most appropriate season for our own shows of this character. ED.



An auxiliary (left) on the lines of T. F. Day's "Sea Bird" exhibited by Senechal, and the lowest priced cruiser shown

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A 55-foot steel Diesel auxiliary ketch and a Dutch cruiser exhibited by the Amsterdam Scheepswerf

In order to obtain full headroom she had been given the usual roof, and the mast was stepped through it — a point of construction I do not personally like. Below, a roomy forecastle, containing cots for two paid hands, led to the galley and pantry which opened into a good saloon with a built-in berth on each side and settees — far too narrow — in front. Just abaft the saloon, to port, came the toilet space; to starboard, a quarter berth alongside the companion ladder. Below a small bridge deck, to port, was a compact, self-contained engine-room. Abaft this, again, a self-draining well and a sail-locker.

Though built-in bunks are a great comfort, it seems better, in small cruisers, to make the saloon settees of comfortable width and to have back settees convertible to pullman berths than to restrict sitting space unduly. With the exception of this point and of far too many small drawers, instead of fewer and larger ones, the accommodation was neatly arranged. As far as I could see, her lines were the same as those to which the exhibit of last year was built, and the remarks I then made still hold good. But her rigging was sturdy, well-planned, adequate; and the yacht is an improvement on her predecessor, though she is priced at a figure equal to that charged by the best English yards.

A handsome 45-foot twin-screw cruiser for the Mediterranean was the product of Despujols

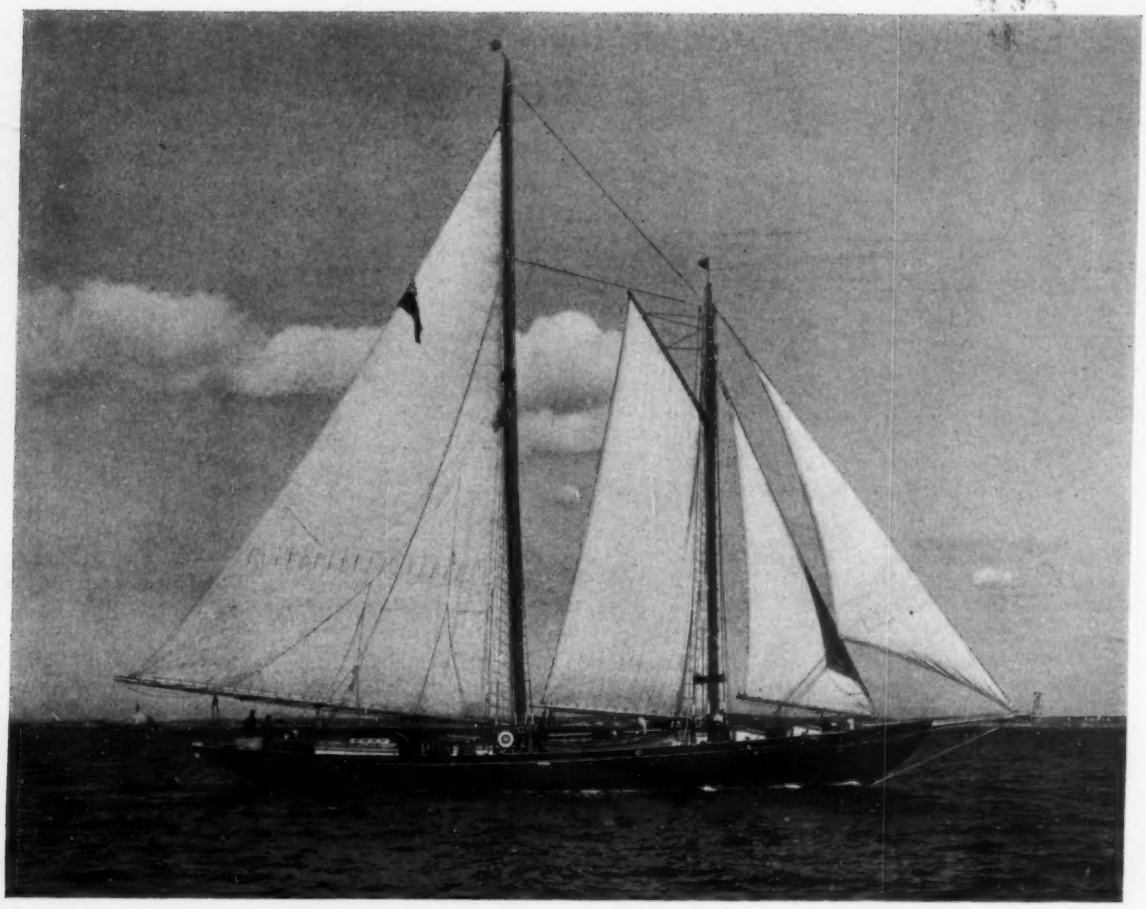
Macario of Deauville showed two smaller cabin cruisers, both rigged as Bermudian sloops, the larger one 30 feet 6 inches, the smaller 24 feet 6 inches over all. Priced at $1800 and $1200, respectively, they were really good value, being planked with mahogany. But I thought them a little lightly built for knockabout craft, and considered many of the rigging details too flimsy — a fault common amongst most of the smaller boats, and a fault that seems to be repeated year after year. Rigging screws, goosenecks, hawsers, runner hooks, mast tracks and slides, and other fittings of this type, should be of ample strength. It costs little more and will pay in the end.

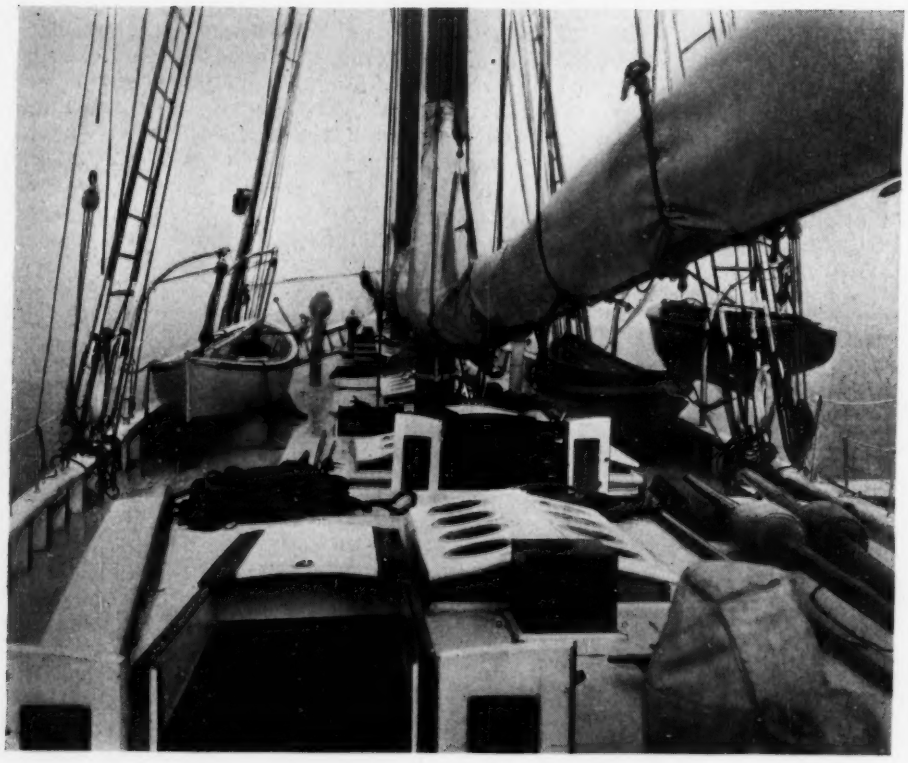
The cheapest cruiser in the show was a 21-foot hard chine Marconi sloop exhibited by Senechal, and clearly modelled on the lines of Thomas Fleming Day's *Sea Bird*. Planked with mahogany above the water line, and with pitch pine below, she had a small two-berth cabin and a galley. For a shade under $850 she was a remarkable value.

None of these cruisers had motors fitted, though in each case space had been left for installation: the Frenchman is particular about his auxiliary and likes a free choice.

Working down the scale of size, one came next to the one-designs — Stars, "Papillons," "Chats," and several others. Here a real effort is being made to produce a handy, well finished boat, cheap to buy and equally cheap to run, suitable for the youth of the nation. The best built Star was exhibited by Faure of Meulan and was a fine piece of workmanship. Of the other one-designs, those shown by Mallard of St. Servan boasted the best finish, and were very reasonably priced. When it is realized that a French-built Star can be bought for little over $500, a "Papillon" for $400, and a "Chat" for about $300, an idea of their excellent value is obtained. In 1932 a great number of regattas, all 'round the coast, are being organized for these one-designs and will undoubtedly

(Continued on page 133)





"Blue Dolphin"

A Study in Attractive Accommodation for an Auxiliary Schooner

It has become something of a habit to think that cruising auxiliaries do not particularly lend themselves to attractive and artistic quarters below decks. Too frequently we see plain, almost Spartan interiors, devoid of any qualities that please the eye. Therefore, the reproductions of the living quarters of the 99-foot schooner "Blue Dolphin" give an idea of what is possible in a vessel of this type. Owned by Amory Coolidge, Rear Commodore of the Eastern Yacht Club, "Blue Dolphin" is from the board of William J. Roué, designer of the famous champion of the fishing fleet, "Bluenose." Something over a year ago her owner decided to redesign the living quarters, and the work was entrusted to Roger Griswold, an architect whose Atlantic voyaging in the schooner "Lloyd W. Berry" is still fresh in the memory of yachtsmen

Everything about "Blue Dolphin" is substantial and practical, as the deck view on the opposite page shows. The views of the interior show the main saloon and the vestibule, off which the staterooms open. Here the woodwork is in Eastern white pine and teakwood, a pleasing combination. The large plain panels are especially effective. Much thought was given to detail. The large open fireplace at the forward end of the saloon, with the oil painting of a brig under full sail, gives a touch not often found in yachts of this size. Deep leather upholstered transoms and easy chairs add to the comfort of the room. Ample book shelves are provided, and the lamps are of special design, altered by the Kelvin & W. O. White Co. to burn either electricity or oil, while the table is a swinging affair, of solid teakwood

For motive power "Blue Dolphin" has a Cooper-Bessemer full Diesel, located directly forward of the saloon. There is practically no vibration noticeable in the living quarters

The End of the Rainbow

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Lunenburg, Nova Scotia, has Much to Offer the Cruiser

By R. G. STONE

"There, on one side, is a perfect land-locked harbor into which the fishing schooners sail"

IF YOU happen to be cruising in Nova Scotian waters, do not fail to find the beautiful harbor of Lunenburg, snuggled back in the South Shore, fifty miles from Halifax, — dock to dock, they tell you. The quaint little village rises in about six levels from the water front and when you reach the top level, there, on one side, is a perfect land-locked harbor into which the fishing schooners sail — no! they chug now, for those beautiful craft that once relied on sail alone lie motionless, mere water weather vanes swinging their prows now this way, now that, as the winds shift. From this highest level one sees on the other side the quiet waters of the back bay, circling in and out around little wooded islands and jutting points, carrying far up into the land its winding course.

But Lunenburg has more to offer the sailorman than its safe and comfortable harbor, its beautiful views, and the quaint, German houses, squat and little when viewed from street level, where one enters, but wide, deep and high when seen from below, as they dig down the hill, floor below floor to meet the contour of the land. Rows and rows of windows there are, ever on the lookout for the fishermen turning in at the entrance between Battery Point and the "Haid," as the natives call Kaulbach Head.

All the people are interesting. German stock mostly — solid, substantial, thrifty, self-respecting, asking little and giving much in dependable lives — no poor quarter here. How proud the early settlers would be if they could rise from their graves and see their descendants keeping true to the old traditions. Too true, sometimes, when measured by modern health standards. For one sees row upon row of unshuttered house fronts with shining windows kept closely shut for fear of soiling or disturbing the folds of the Nottingham lace curtains. Only a hearty, seafaring people could live in these airtight rooms. But lounging in the store fronts, sprawling over the counters or on the curb, the lean, wiry, muscular figures, the steady blue eyes accustomed to gazing far, the bronzed skins, all attest the vigor of the race, and one is not surprised to hear of those who live and work to 80 years, to 90, and even beyond.

Go up on Block House Hill some Sunday morning — not on a week-day except for the view and communion with yourself, for then these worthy children of old Germany are all at their appointed tasks and the only sign of life from the hill is the sweeping gull, or a housewife in an upstairs window vigorously shaking any stray dust that may have crept into the house over night. But on Sunday, even before the church bells begin to ring, watch the old men wander in, lean back on the crude wooden benches carved with the initials of generations of Lunenburg youth, and with elbows behind the rail, draw deeply on their pipes while they gaze at the harbor below and tell the tales of yesterday. And a different tale it is from that of today, with all these idle ships swinging at anchor. No three-masters have been to sea for a couple of years, — no use trying to compete with steam — and eleven two-masters have been in the harbor all summer. Only twenty schooners on the Banks this season instead of the usual fifty or sixty, and some of them coming home only half loaded.

A deep voice booms out from a neighboring bench: "Any man who comes home and ain't loaded is a damn fool, but I sez to him 'Glad to see you, fish or no fish.' 'No' sez he, 'I ain't got no fish but I thank God I'm back again in God's country.'"

With fish scarce and prices what they are now, a captain might as well stay home and tend his little garden. And as for shipbuilding,

Photos by L. G. Jewett, Lunenburg

"On tables, benches, shelves, are finished ship models of every kind"

not much is left of that business down in the yards — only one rum runner on the stocks this summer. Heaven forbid that the old U. S. A. give up the great prohibition experiment. It, at least, is keeping up a certain kind of shipbuilding, even though this new mastless craft requires only swiftness, carrying capacity and invisibility, and is not much to look at.

One by one the old men drift on to the hill, rap out their pipes on the wooden bench, refill, lean forward on their knees, draw deep, look far, listen-in and tell tales of their own. Youngsters come up to ride the old cannon, to hang around, and drink in the yarns which are spun.

But do not slip out of the harbor this Sunday thinking you have seen Lunenburg. Wait, instead, for the most silent, restful night of your life. Not a sound but the slap of water on the side of the boat until seven o'clock when the shipyard whistle blows. If you're a sound sleeper you'll pass even that by, for it's over in a minute — and then more silence. The rest of the town seems to keep bankers' hours — except the housewives, who are up for the inevitable Monday wash.

When breakfast is over and things stowed away, tie your dinghy to W. C. Smith & Co. Ltd.'s dock — if there isn't a schooner unloading cod there — and with hands on hips or knees (if you're not a mountain climber by nature) walk across the railroad tracks, up a flight of steps to the next level, rest for breath, and look to right and left along the street for some sign of life. A roomy sail loft you'll see, surely a fish store, a cooperage, tinsmith shop, general store — *all* ship supplies, groceries, clothes, gear, coal and wood, fuel, feed, flour. A knot of bronzed men lounging in a doorway. They look at you as steadily, as unblinkingly as the matched oxen passing by with their tiny tinkling bells, carrying their load of stones for ballast — cheap and easily gotten and as easily thrown out when the fish are kenched in.

Now, another block up, almost straight up — and there on your left is the oldest house in Lunenburg. Most of the old ones have gone, supplanted by rococo and many-bay-windowed affairs of the eighties. But this dignified old red house, only a story and a half in front, runs downhill toward the harbor and spreads out into a house big enough for the family of any fisherman. On, past little low buildings that were once shops and are now closed and empty with drawn blinds. A blacksmith's hammer across the way is the only sound.

The door of a weather-beaten shingled shed, flung wide open, is the entrance to the shop

When you come to the corner, turn back again to the harbor, pass a little white picket fence — and behind it is one of those colorful German gardens — and right there, with small-paned windows looking out on this garden and a wide barn door flung open to the street, is a little weather-beaten shingled shed, would you call it? Being a yachtsman, you probably won't take time to call it anything at all, for one swift glance will tell you that you have come to the very end of your rainbow. Here is your pot of gold. You need go no further. Now the fog can drift in if it will and you can be happy, days on end, in this harbor. In the far corner of the shed, on a high stool between two large windows of many small panes, sits an old man, intently working at a bench. Near by, on tables, benches, shelves, are finished ship models of every kind, while all about, and even tucked in the rafters, are scraps of wood and heavy timbers. Tools of every description are here, old sea chests, boxes full of model fittings. Here surely is the best — fashioned so lovingly, so patiently.

Solomon Morash, model maker of Lunenburg, at his work bench

Photo by J. E. Knickle, Lunenburg

Did you think that race of builders who knew ships that were ships had gone? Many models of *Bluenose*, of course, this being Lunenburg — *Bluenose* with sails spread, *Bluenose* with sails furled; on painted background a half-model with sails of thinnest wood and mounted in a glass case with curving front. Here is *Flying Cloud*, swiftest and most beautiful of the old-time clipper ships. They tell you, hereabouts, that some of her planks were used in an old bridge that is still standing across Little River, about two miles from Saint John, N. B. There's the *Henry L. Montague*, just behind, with her round bow; and here, in another glass case, is the old frigate *Constitution*, sails spread against a very blue sky. Next to her is the *Shannon*, on station off Halifax during the War of 1812, and off on a table by herself a beautiful barkentine which later you learn was a yacht built in 1804 for His Royal Highness, the Prince of Denmark.

The old man has not heard you yet — that is

"With fish scarce and prices what they are now, a captain might as well stay home"

his one and only failing, apparently, and one not noticeable when once you begin to talk to him. He can hear you then, and his keen eyes and his delicate touch more than make up for the ears. In his eighty-seventh year is Solomon Morash, born across the harbor about a mile back, son of Philip Morash, master carpenter, and grandson of one Michael Morash, carpenter, unto whom, according to the records of the Township under date of June 30th, 1784, had been given, granted and confirmed, a parcel of 330 acres of good land. Old Solomon Morash began his life work when he was 14 years old — 73 work years in this pine- and salt-laden air — as an apprentice to his father, and learned how to handle tools. From that he went to building houses and then to ships, and in time to designing them. He it was who designed the first spoon-bowed schooner built in Lunenburg — you will see a model of her over by the door. In the hall of his interesting old home — just a step down the hill to the gate — he will show you a colored photograph of this schooner lying at anchor in Lunenburg Harbor and in a fine bold hand written below:

"Schr. Henry L. Montague,
150 Tons
"The first round bow schooner built in
"Lunenburg, N. S. Designed and built
"1906 by Solomon Morash for W. C.
"Smith & Co. — Lunenburg, N. S.
"Commanded by Capt. Abm. Cook.
"Her first trip was a record — to Port of
"Spain — to Cadiz and return. — Time 1
"month and 25 days"

But you will come back to the house later on to see the amazing work this young old man has done — the most delicate and exquisite cabinet work, though the *designs* he has used here are not as fine as those of his beloved ships. One would think it would have taken a lifetime to have achieved that amazing inlaid table of 2000 pieces of wood from the old Gen. Rufus Putnam house built about 1765 at Rutland, Mass. The large rocking armchair was made with 5000 pieces, a rare mosaic of 25 native and 25 foreign woods. One piece in it is from an old keel lost in the American War.

See all this before you go; but get back to the shop now, for there is where you will want to spend a lifetime studying his many models and talking to Solomon Morash of them and of himself. Making conversation you say, "These are done to scale all right."

"Of course," the old man patiently replies. "Now just sit down and I'll show you how to lay a vessel down."

With the quick movement of a youth, he stoops down to an old chest, draws out a roll of drawing paper, proudly spreads it out on the bench and with arm holding down the edges, he points to beautifully and carefully drawn plans. At the bottom of the drawing, in the same bold, clear, fine script that you saw on the colored photograph (and this man had no schooling for there were no public schools in Lunenburg when he was a boy) —

Lines of model to be used in building 3/8" to ft.
and on the upper half of the second sheet:
½ plan of deck:
and below:
Longitudinal Section 3/8" to ft.

Carefully he will explain to you every detail, and how all the frames must be worked out to number and then placed. It takes patience, yes, and time, he agrees, and when he works, he must *work* alone. Doesn't he get lonely, then, in the long winter work hours? "No," he

(*Continued on page 140*)

At a Lunenburg dock. Coaster drying sails

A Lunenburg shipyard, and part of the idle fleet. Only twenty schooners have been on the Banks this season

Recollections of a Windjammer

By COMMANDER J. G. BISSET, R.N.R.

Chief Officer of the R.M.S. "Berengaria"

AS I sit in my palatial cabin on board one of the world's largest and most luxurious liners, my mind often harks back to my first voyage as an officer. This was in 1902 when I signed on as Second Mate of a full-rigged ship the *County of Cardigan*, belonging to William Thomas & Co., of Liverpool. I had already served four years as apprentice with this company, and as my time expired when abroad, the Captain signed me on as able seaman, in which capacity I served for seven months until the ship arrived in England. I then went to a nautical school and after five or six weeks' intensive study, succeeded in passing my examination. At this time I was nineteen, stockily built, and as hard as nails.

With my newly won "ticket" in my pocket, I went to the owner's office and proudly announced to the manager that I had passed, and wanted a job as Second Mate. He took me in to see Mr. Thomas, the owner, who congratulated me warmly. On hearing my request, he said, "Do you feel capable of taking on a job as Second Mate of a large sailing ship?"

"Well," said I, "that was my intention when I went up for my examination."

"Yes, yes," he replied, "but you look so young. Do you think you will be able to control the men and make them obey your orders?"

This nettled me a bit and hurt my pride. I had been five years to sea, had weathered cyclones and tornados, been shipwrecked, dismasted and washed overboard, had several fights, and now held a Second Mate's ticket, and here was this old landlubber doubting my ability.

"You give me a job as Second Mate," said I, "and I'll see that the crowd do as I tell them."

"All right, young man," said Mr. Thomas, patting me on the shoulder, "We'll give you a chance. You can go as Second Mate of the *County of Cardigan*. Here, Mr. Evans (to the manager), give him a note to take down to the Captain. You can start work next week and help to get her ready for sea. The wages will be four pounds (twenty dollars) per month."

The wages were not princely, but it was the first time I'd ever had any, so thanking him, I secured the note and made my way down to the Salthouse Dock feeling as proud as a dog with two tails.

Entering the dock gates and rounding the end of the shed, I got my first glimpse of my ship lying on the other side of the dock. My spirits fell a little at the sight of her. I had served my time in a trim little 800-ton barque, built almost like a yacht. Here was a great 1600-ton full-rigged ship, with lines like a cargo tramp, and so heavily sparred as to look clumsy. She had evidently been in dock for a long time. Her sides were scarred and rusty, and her once white masts and yards grimed and blackened by the smoke of the great city. Up aloft, she had been stripped to a gantline, and several fag ends of gaskets and "Irish Pennants" were whipping about forlornly in the breeze.

Mounting the crazy gangway, I jumped down on to the deck, where the same conditions prevailed. She had not been washed down for weeks, and the remains of her grain cargo was scattered, damp and moldy, around the hatches. I went aft to the monkey poop, and down the dingy companionway into the cabin. A tall, thin young man standing in the cabin doorway asked me my business. I intimated that I had a letter for the Captain. He took it from my hand and gave it to an older man who was seated at the cabin table. Having read it, the Captain, for it was he, tossed it over to the young man and said, "Here y'are Mr. Mate, read that. Come in my lad and let's have a look at you."

I stepped inside and the Captain looked me over.

"So you're the new Second Mate," said he. "You look mighty young. Ever been Second Mate before?"

I recited my history up to that time; it didn't seem to please either of them. The Captain then said, "I asked the owners particularly, to send me an experienced man, and here they send me a boy just out of his time."

"Yes," agreed the Mate, "I should advise him to get a job in a small ship for a voyage or two till he grows up and gets some experience."

At this, they both looked at me hopefully, thinking I would back out. It was evident that their minds had been set on having an older man and I was a bit of a disappointment to them. Fortunately, I was wise enough not to attempt to argue. I let them go ahead and talk it over, which they did with total disregard to my feelings, and at last the Captain said, "Very well, you'd better start next Monday and we'll soon see what you're made of."

I went ashore, slightly discouraged at my reception and with vague thoughts in my head of growing a beard and moustache to hide my youthful appearance. The following Monday I turned up at 7.00 A.M. to start work. I had provided myself with a peaked cap of rakish design, with a patent leather strap over the top, and worn well on one side. This was the generally adopted uniform of the smart young Second Mates of those days. Four young apprentices joined the ship at the same time, and during the next two weeks I busied myself with them, getting stores on board, cleaning the ship and bending jibs and staysails. The Mate spent most of his time on the quay receiving cargo and thinking up endless jobs for me to tackle. He was a terror for work and couldn't bear to see us idle for a moment. Luckily, I was also a glutton for work and during my apprenticeship had picked up nearly all there was to know about "sailorizing," so that he had little to complain about. What I lacked was experience in handling men and trimming yards and sails, and he lost no opportunity of telling me of the difficulties in store for me when we got to sea. I found that he had served his time and been Second Mate in small coasting vessels, and that his mentality and ideas had become warped and stunted in the process. I kept this to myself, of course, but the longer I sailed with him the more apparent it became.

Eventually, having had the heavy squaresails bent by riggers, we shipped a crowd of runners and set out to tow around to Glasgow to finish loading. The runners were mostly old riggers who signed on for the run 'round, at a lump sum. Their contract called for them to do no work other than the handling of the ship. Once the tow rope was made fast they divided themselves into two watches and stood by. The sight of them doing nothing but lounge about and smoke nearly broke the

Mate's heart. Our course lay in narrow and fairly sheltered waters, so there was little chance of breaking adrift from the tug and having to make sail to avoid running ashore, but we were all ready for such an emergency. Under the circumstances, my first experience of watch keeping consisted of walking up and down the poop and keeping an eye on the helmsman to see that he followed closely in the tug's wake.

The first morning out I was on watch from four to eight. About 6.30 dense fog set in and I called the Captain. He came on deck in a vile temper and greeted me with, "You must be a bloody Jonah." Thinking this was meant as a joke, I replied with some suitably flippant remark, only to be immediately crushed by a menacing look and, "Keep a lookout there. I don't want any damned back chat from you." And so I learned my first lesson. Never adopt a familiar attitude with the Captain. I have never forgotten it. During the next eighteen months that we sailed together we rarely conversed except on business. He treated me as a boy rather than as an officer and frequently adopted a bullying manner, knowing that I did not dare hit back. He knew that at the end of the voyage I would require a reference from him, without which it would be impossible for me to sit for my first mate's examination. Perhaps he thought he was giving me good training, and I will say that he taught me to control my feelings. Often enough I longed to throw discretion to the winds and come to words with him, or even blows, but having thought it all out, I decided to keep my temper. In the end he gave me an excellent reference.

But to resume. When the fog set in we were in the vicinity of the Mull of Cantyre. It was as thick as a hedge, so that we lost sight of our tug and could barely hear her fog signal. We decided to shorten in the tow rope, and for this purpose I went on to the forecastle head with the crowd. Picking up the hand fog horn, I was just about to make the signal when I heard the blast of a steamer's whistle, close on our starboard bow. I answered with the regulation long and two shorts and a moment later made out the dark shape of the steamer standing right across our bows between us and the tug. "Hard a Port!" I yelled, and at that instant our tow rope sank down into the water and a series of short blasts from the tug indicated that he had slipped the rope. The steamer stood on, and answering our port helm, our bowsprit cleared her stern by inches. The only person visible on her was a small boy vigorously pulling in the patent log line. The rest of her was shrouded in fog and in a few seconds she had disappeared, carrying with her a few choice curses from our skipper. It took nearly an hour to recover the tow rope and make the tug fast again, and by this time the fog had cleared away.

The next morning we berthed in the King's Dock, Glasgow, and our runners returned to Liverpool, leaving the Captain, Chief, Mate, myself, four apprentices and the cook by the ship. We took ten days to complete loading, then, having signed on a full crew, we left the King's Dock on a fine afternoon, bound for Freemantle, West Australia. Our crew was in the customary state of intoxication and in no mood for work. Just as we had made the tug fast and were moving out of the lock, one of them, a young Scotchman, decided to go ashore. The Captain saw him throw his bag on to the quay and clamber on to the rail, and sang out to me to stop him. Dashing forward, I grappled with him on the rail and for a few moments we were in imminent danger of falling between the ship and the quay, where we would assuredly have been crushed and drowned. Fortunately, I managed to force him inboard and we crashed to the deck in anything but a loving embrace. Someone on the quay threw his bag back on board, striking me on the head and nearly knocking me out. However, I managed to hang on to my man till we were well clear of the lock. As soon as I let go he made a dash to jump overboard. This time the Mate came to my assistance, and kicking and struggling like a wild cat, we dragged him aft and locked him up in the sail room.

The tug towed us about forty miles clear, then signalled us to make sail. The crew had sobered up considerably, and having roused them out, including the Scot, we very soon had the topsails and fore course spread, and with the fresh breeze, began to over run the tug. She now signalled to us to let go. Throwing the turns of wire off our bitts, it flew out with a shower of sparks and so severed our last link with home.

Having got the rest of the sail on her, all hands were mustered aft while the Mate and I picked watches. Our crew consisted of Captain, First and Second Mates, carpenter, sailmaker, four apprentices, twelve able seamen, cook and steward (one man), and cabin boy. My watch consisted of two Welshmen, the young Scot, an old Irishman named Murphy, who had spent most of his life in American ships, a Swede, and a West Indian Negro known as Charlie. The two apprentices had been a couple of years to sea and were hefty, useful boys. The Mate had a similar mixture, including two Welshmen and a huge American Negro named Gregg.

The four Welshman belonged to the same town as the Captain and he took a great interest in them. Gregg was the only one to join the ship sober. He was a fine looking man, vain as a peacock, and inclined to be cheeky. He had the utmost contempt for Charlie, who was of a shambling, dirty type. Gregg lorded it over the forecastle for the first couple of weeks; then, much to our surprise, Morris, one of the Welshmen, challenged him to fight and knocked seven bells out of him. Morris told me later that he had been in the prize ring, but couldn't keep off the booze. Anyhow, Gregg was humbled and gave no more trouble.

I started my watch keeping duties with a good deal of trepidation, having had my youth and inexperience unmercifully rubbed into me by the Captain and Mate. Having failed to get rid of me, I suppose they thought the best procedure was to make the best of me. They were undoubtedly good sailormen, and under their able, though harsh tuition, I soon became proficient in trimming yards, setting and furling sail, or, in other words, sailing the ship to the best advantage. As for handling the men, they made things no easier for me by frequently interfering, countermanding and correcting my orders. After a few weeks of this treatment they began to realize that I was capable of doing things on my own and their treatment improved. This enabled me to assert myself with more confidence and I had very little trouble in obtaining obedience. At the beginning, the Captain gave me three bits of advice. As nearly as I can remember, these were his own words. "Never be familiar with the men." "Never call a man out of his name." "When you give an order, see it carried out to the letter." I found the advice good, but I am afraid the Captain did not act on the first part of it himself, for he was constantly "yarning" and joking in Welsh with his four "townies." He never yarned or joked with me, so I retaliated by keeping his four "friends," absolutely at arm's length.

When we were about two months out an incident occurred that rather shook his confidence in his "townies." About 10.00 P.M. one fine night I heard sounds of singing forward. This was unusual, for at that hour the watch

below were asleep. Investigation showed at least eight of the seamen in an advanced stage of intoxication. Stepping suddenly into the forecastle, I snatched a half empty bottle from the table and quickly made my way aft to inform the Mate, followed by loud groans and curses from the crew. We guessed at once that the men had been broaching cargo, but the Mate, who had personally supervised the loading and stowage of our general cargo, was quite convinced that the cases of whisky had been so blocked in with other cargo that it was impossible to get at them. In the forecastle we found the light out and all hands turned in as if nothing had happened. A thorough search revealed two full bottles in a pair of seaboots. After removing these there was nothing to be done but let them sleep it off. We found that the hatches had not been tampered with, so we turned out the smallest apprentice and lowered him down the amidship ventilator. He found some tissue paper bottle wrappers at the bottom, and with much difficulty crawled over the top of the cargo and found a broached case.

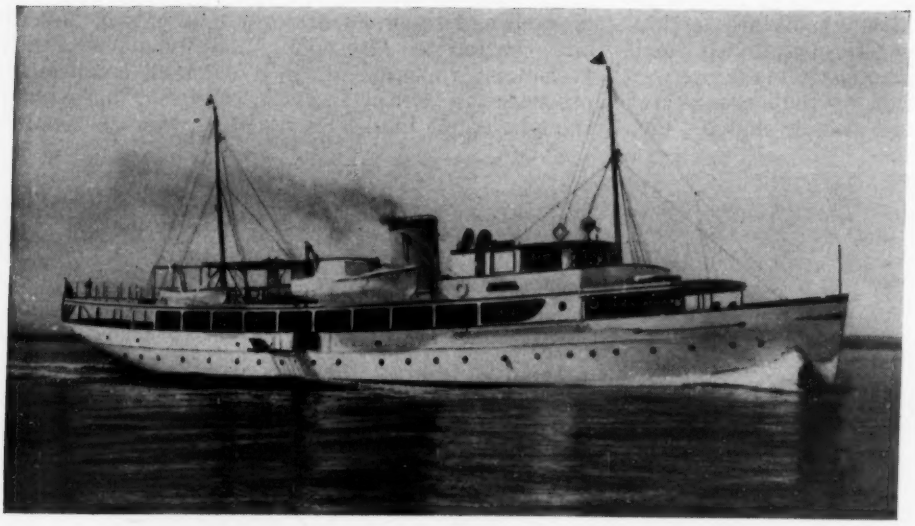
The blame for the incident was laid on me. It had occurred during my watch and if I had been keeping my eyes open the men couldn't possibly have got down the ventilator without my seeing them. This seemed reasonable enough, so with due humility I accepted the blame. After breakfast all hands were called aft for an inquiry. The Captain stormed and raged, and accused a Cockney in the Mate's watch of going down the ventilator, as he was easily the smallest man on board. He admitted it quite cheerfully and on further questioning said, "I went down in the second dog watch when you and the Mate were yarning with Morris at the wheel." This infuriated the Captain, and he logged eight of them five shillings each (including his four "townies") and threatened to jail them all on arrival in Freemantle. After the men had been dismissed, I hung around expecting some sort of apology, but all I got was a scowl from the Mate and instruction from the Captain to "let's have no more of it." The ventilator was securely plugged and the incident considered closed. Not quite, however, for that afternoon, about five o'clock, the four Welshmen appeared aft in a drunken condition, and proceeded to tell the Captain, in Welsh, just what they thought about him. This outbreak was the result of a bottle that had escaped our search. The Captain placated them somehow, and having sung a Welsh song with great gusto, they ambled forward and slept it off. We had no further trouble after that.

" . . . I made out the dark shape of the steamer standing right across our bow, between us and the tug"

Shortly after this incident we rounded the Cape of Good Hope, and commenced to run our Easting down. We experienced very bad weather and tremendous following seas. She was a heavy ship to handle and a dirty brute in bad weather, especially when running before it. She had to be hove to in plenty of time. On one occasion we ran too long and the sea became so high and dangerous that the Captain feared to heave her to. At the height of the storm, when we were scudding under nothing but the two lower topsails, she shipped a purler over the stern and swept away the cabin skylight and one of the two men at the wheel. This was the Swede in my watch. We picked him up amidships, half drowned, with a broken leg and other severe injuries. He died a few hours later. I escaped by jumping into the mizzen rigging, but even at a height of ten feet above the deck, I was very nearly overwhelmed by that tremendous wall of water. The second helmsman was crushed, breathless, and I just managed to take over the wheel from him as he collapsed on deck. The Captain dashed up on deck like a drowned rat, for she had filled up the cabin through the skylight opening. He decided at all costs to heave her to, for another couple of seas like that would have caused her to founder.

Rousing out all hands, we manned the braces, sometimes up to our armpits in water, and braced her up on the port tack. Then, watching for a favorable opportunity, the Captain gave the order, "Hard down!" and

(Continued on page 140)



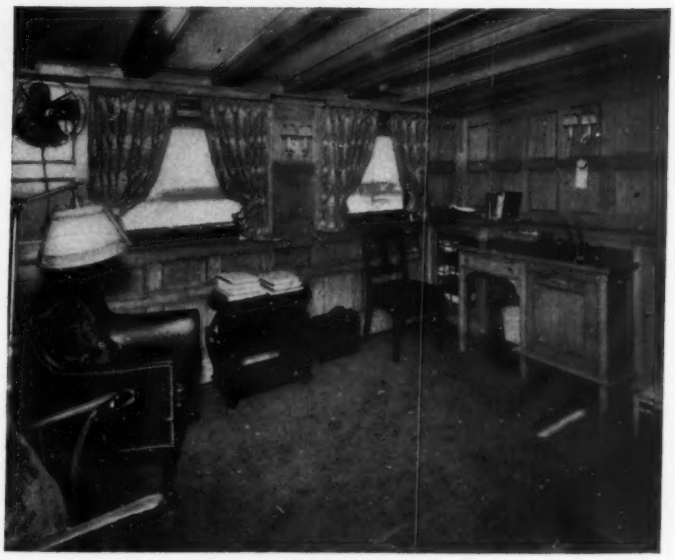
"Felicia"

+

A Diesel Cruiser
148 Feet Long

+

"Felicia" was built for Senator Jesse H. Metcalf, of Providence, by the Bath Iron Works Corporation. She is from the board of Henry J. Gielow, Inc., and is powered with Cooper-Bessemer engines. A rugged yet smart and comfortable Diesel cruiser, she is well equipped for the hardest of service. The interior woodwork and paneling have been handsomely carried out in natural wood entirely in keeping with traditional ship interiors. Large windows provide ample light for the writing desk in a secluded corner of the deckhouse. The main living room is suggestive of warmth and comfort, and centers about a cheerful fireplace and a ship model mounted in a glassed recess over the mantel



The inner harbor at Singapore was so crowded with boats and small steamers that we had difficulty in finding an anchorage for "Intrepid"

An "Intrepid" Cruise

Part II—From Borneo, Across the Indian Ocean and Through the Red Sea

By ROY M. BARCAL

SHORTLY after *Intrepid* had been towed up the Sarawak River to Kuching, in Borneo, visitors began to come aboard. In the afternoon we visited the Club and by evening I am sure we had met most of the residents, including the Rajah, the Ranee, and their daughters. The Rajah and his family were very much interested in our voyage and arranged to come aboard *Intrepid* the next morning.

Upon our arrival at Kuching the engine had been removed from *Intrepid* and taken to a shop for repairs. On the morning of January 24th, it was in order again and we had no further excuse for prolonging our stay. At 8:30 A.M., accompanied by dozens of small native dugouts, we started down the Sarawak River. Though we arrived at the river mouth shortly after noon, it was 2:30 before we were over the bars and able to shape our course for Tanjong Datu, 40 miles away. At 11:45 that night we took our departure from Datu, altered course slightly, and headed for Singapore, 370 miles away.

This run gave us our first taste of ideal sailing. With the exception of a couple of rocky islands about halfway on our course, we had the open China Sea before us and were favored with a fine quartering breeze. In 65½ hours we covered the 370 miles, dropping our anchor in Singapore at 3:30 on the afternoon of January 27th. We had actually sailed 1,530 miles since leaving Manila Bay on January 2nd.

At Singapore we spent four days filled with interesting sightseeing and delightful hospitality before proceeding on our way. It so happened that the inner harbor, where we were anchored, was crowded with small steamers and boats. As a stiff breeze was blowing we did not bother to start the engine but, instead, hoisted sails and shortened up on our anchor, but before we could get *Intrepid* under control she started dragging. In order to gain sufficient headway to come about it was necessary to head right into a small tug until we were within about eight yards of her, when we quickly came about. This maneuver caused plenty of excitement all around us, for, had we missed stays, we certainly would have struck the tug. As it was, we missed her by three or four feet and no harm was done.

It took twenty miles of sailing among dozens of Islands and reefs before we were clear of Singapore Straits and it was dark when we headed up the Straits of Malacca, keeping well over toward the Malay side, our objective being Penang, nearly 400 miles up this coast.

On February 2nd, about noon, abreast of Port Swettenham, we ran into a fairly stiff squall but we had no trouble carrying through it with full sail. Immediately after the squall the wind shifted dead ahead. Just ahead lay a lot of shoals with only a quarter to one and one-half fathoms over them which we believed we could get through before dark, rather than go around them, which would take us miles out of our way. Of course, we had just managed to get into these shoals when the breeze dropped to almost nothing and as the tide was against us we deemed it prudent to get into deep water as quickly as possible. By doubling back a short distance and picking an opening in the shoals, we headed out for deeper water. This proved to be a wise decision, as even then it took until nine o'clock that night before we reached water deep enough to make it safe to continue on our course.

On February 4th we arrived off the 16-mile channel leading up to Penang. A strong tide, which was against us, and the care required to keep *Intrepid* from being swept on the shoals which lay along both sides made progress slow, and it was 9:30 that night before we anchored at Georgetown, generally known as Penang. Hundreds of Chinese junks filled the harbor and it was

At Penang there were hundreds of junks, making it difficult to effect a landing

Against an evening sky. Arab dhows in the Red Sea

difficult to find a vacant space. We had just settled down when a big junk almost rammed *Intrepid*. Upon her heels came another that glanced the sides. Then the prow of a third struck the spreader stay and cracked a turnbuckle. Junks coming in seemed deliberately to bump the boat which lay nearest the point where they wished to stop, in order to kill headway. A few hours of this sort of thing was enough, and early next morning we searched for an anchorage in a less crowded spot. The only place fairly close to shore was between a buoy and a ferry dock, an area that was supposed to be kept clear, but we anchored there, expecting to be chased out at any minute. Innumerable times we were told that we could not stay; but we only changed our position a little so that the ferry could enter and leave.

Most of the following day was spent visiting notable places on Penang Island, among them the famous Ayer Hitam Temple where we fed the sacred turtles which, offhand, I should say numbered 500. Provisioning, taking on water, oil, etc., being finished on February 8th, we left Penang that afternoon, going out the North Channel. At 6:30 we had cleared Penang Island and set a course across the Straits of Malacca for Pulo Weh, 325 miles to the west. This is a beautiful island, a Dutch possession, lying about ten miles off the northwestern tip of Sumatra. Although we had practically no wind until late the following afternoon, we arrived off the town of Sabang, on Pulo Weh, about 1:00 P.M., February 11th, and the next few days were spent in seeing all we could of this lovely spot.

By noon of February 14th we cleared Pulo Weh for Colombo, on the Island of Ceylon. Ahead of us lay a stretch of 960 miles, 800 miles of which were in the open Bay of Bengal, and for the first time I experienced a feeling of doubt about navigating solely by dead reckoning. In Manila I had made the statement that I could take a boat to Gibraltar without resorting to celestial observations. Here was the first real test.

We started out with a good, strong wind almost dead astern, main boom to port, spinnaker to starboard, making eight knots and headed W. ½ N. This course allowed for three degrees of westerly variation and a quarter of a point for the set of the current — purely an estimate. As it turned out, this proved the simplest problem in navigation on the entire passage. We scarcely needed the compass, as we were in the direct path of steamers and in sight of them most of the way. One night we counted the lights of thirteen. It was beautiful sailing weather and with a steady wind behind us we were making six or seven knots regularly. We continued in the steamer lane until the 19th when we left it, altering our course a little to the north in order to be certain of sighting Great Basses flashing red light which marks the southern end of outlying reefs stretching about ten miles offshore from Ceylon.

That night, about 9:00 o'clock, we began peering into the darkness for a glimpse of the light, which, according to our dead reckoning, should have been only about eight or nine miles away. We could see nothing but heavy masses of dark clouds ahead which soon brought a severe squall and we were deluged with rain. As these squalls came from the direction of land, we felt we were not far offshore. Taking no chances, we had partially lowered the mainsail in preparation for reefing, when out popped the flashing red light less than a mile away! Instead of reefing we immediately hoisted full sail again, altered our course a little to the south and went tearing along on our way. The squall soon petered out, but others followed, obscuring another light on Ceylon, only seven miles away.

All the next day we enjoyed a beautiful view of the Ceylon mountains. At midnight we could see the glare of Colombo Light, but the wind was so light that it was 11:30 the next morning before we entered harbor.

A pilot boat came to meet us, the pilot insisting that pilotage was necessary because of the congestion in the harbor, so we took him on board and eventually tied our bowline to a buoy to which was also tied the stern line of *Shenandoah III*. Fore and aft mooring being compulsory, we dropped our anchor astern to keep from swinging into the fairway. Then I proceeded to feast my eyes on an American ensign and the N. Y. Y. C. pennant flying from the *Shenandoah III*. This four-masted schooner towered so far above us that *Intrepid* seemed a toy in comparison. People aboard her were soon hailing friendly greetings and kind offers of assistance. Accepting a cordial invitation from the owner, Mr. Gibson Fahnestock, we went aboard and had the pleasure of meeting his charming family. They had sailed the *Shenandoah* from Shanghai and were enroute to Nice. We saw them again at Port Said, and at Naples.

We felt that we had done remarkably well in making a run of 960 nautical miles from Sabang in exactly seven days, so we let a little time go leisurely by before embarking upon the long leg across the Indian Ocean to Aden. The Royal Colombo Yacht Club extended us the courtesies of the club and we spent pleasant days ashore.

On the evening of March 3rd, just as a full moon was lighting up the horizon, we made sail (which hung motionless), started our engine, and crept past the shadows of ships from all corners of the earth. The rail of a brightly lighted P. & O. passenger steamer was lined with onlookers in formal evening dress who called out cheerily as we passed. For a few yards we crawled alongside the *Malayan Prince* just getting underway, but she slipped out of the harbor ahead of us and soon disappeared from sight.

All night and the next morning the wind was very light and dead ahead — not a very propitious beginning for the 2035-mile voyage ahead of us. Then on the 4th, about noon, as if to encourage us, a good N. E. breeze came along, but by four o'clock had left us in a dead calm. Our log for the 5th, 6th and 7th reads: "Very light head winds and dead calms all day." On the afternoon of the 8th we had a fair N. to N. E. breeze for four hours. Time dragged along until about 1:00 A.M. of the 10th before we were able to see, reflected in the sky, the light on Minnekoi Island. We were 420 miles from Colombo and had been out seven days!

By sailing a little south of our course we were able to carry the spinnaker, and for thirteen days used it almost continuously. By staying south of our course, as we had been doing for five days, we were out of sight of steamers. Our dead reckoning, therefore, had to be accurate if we were to hit Sokotra Island, which is 1500 miles from Colombo. While we could have gone south of Sokotra, this course was reputed to be very dangerous because of strong currents and small islands, infested with wild tribes, and we were very anxious to go north.

On March 18th we figured that we had made enough westing and altered the course farther to the north to make a landfall on the island. At 4:00 P.M., on the 19th, although it was quite hazy, we sighted Sokotra. We had come 1500 miles solely by dead reckoning and, although luck had played a prominent part in the matter, it was particularly gratifying to find that we were only eight miles from our dead reckoning position. Not long after this we began to see steamers again and there was no difficulty in going up the Gulf of Aden.

On this passage our bathing suits were worn out and all that was left of most of our old trousers were diminutive shorts, so sarongs became the fashion on board — improvised sarongs which greatly reduced our supply of bath towels. During the day the deck grew so hot that shoes had to be worn. These, and a sarong, or shorts, constituted our only wearing apparel and, although the sun was extremely hot, no ill effects were felt.

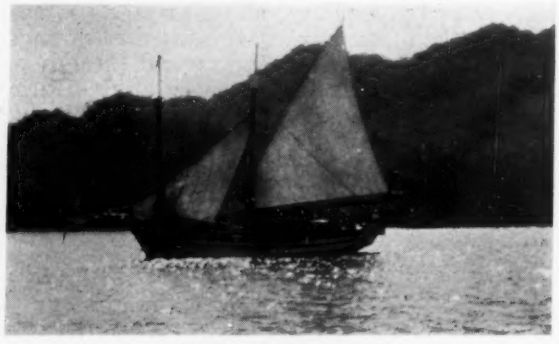
Egyptian dhows from the Nile were met near Port Said

Skipper Roy M. Barcal at the helm of "Intrepid"

We landed at Aden on March 24th, having made a steamer route distance of 2035 miles in twenty days without a stop. We had already dropped sail and were letting go our anchor when a pilot came aboard. Much to our surprise, two months later, while in Naples, we received a bill from him for ten Straits Dollars to cover pilotage in Aden. We had not asked for a pilot and as no services had been rendered, the bill is still unpaid.

While in Aden we made the acquaintance of William Robinson who was then bound for New York in his 32-foot ketch *Svaap* which was following nearly the same track as *Intrepid*.

Our introduction to the Chief of Police of Aden was unique. Although we knew that sharks were supposed to abound in these waters, our desire for a refreshing swim overcame our caution and we dove in. A few moments later we were attracted by the shrill sound of half a dozen police whistles, accompanied by yells from shore. It proved that the Arabian police were calling the attention of their superior to our swim. The police boat came quickly alongside, bringing the Chief of Police. He jokingly announced that he would have to take us to jail, and we tried to bribe him with a drink. Finally the meeting ended in our accepting an invitation to go with him the following day on an inspection trip to Sheik Otinan. This genial gentleman explained that so many people had been killed by sharks that it had become necessary to enforce rules prohibiting bathing except in enclosed areas. We had heard Aden described as "about the last place on earth," and were therefore agreeably surprised when we found it both an interesting and attractive city.



A native schooner, Borneo

On March 26th *Intrepid* sailed out of the bay escorted by half a dozen yachts from the local Club, adding the last happy memories of Aden. By eight the next morning we were ready to enter the Straits of Bab el Mandeb, the entrance to the Red Sea. Passing between the mainland and Perim Island, we encountered heavy seas coming from every direction and caused by the backwash from the island, on one side, and the mainland on the other. Fearing that the boom and mainsail might be damaged, we lowered the main and started through with two jibs. *Intrepid* shipped a few seas before we finally cleared the narrow pass and sailed into the Red Sea.

The west coast of Borneo has several picturesque harbors

As we left the channel the wind was blowing a half gale from astern, so instead of setting the main we set our small spinnaker. The wind increased and whipped up the nastiest short seas of my experience. The spinnaker held for about an hour and then blew to smithereens. It was replaced by triple-reefed mainsail. That afternoon we passed Mocha, of coffee fame, on the Arabian shore. It was the first Arabian city we had seen and it looked so alluring from the water, with its hundreds of white buildings, turrets and mosques, that we were tempted to stop, but the breeze was so favorable that we continued on our way.

Early in the morning of the 28th we passed Abu Ail Light and shaped course to pass to the west of a group of islands 70 miles north. About midnight we passed Jebel Teir Island, from which we took departure for Port Sudan, some 450 miles beyond. The wind held fair until the 29th when we were becalmed before picking up head winds which resulted in a long, hard drill to windward.

Gradually working over to the Egyptian coast, by midnight of the 31st we sighted the flash of Taelai Light. For two days we continued beating up the coast, the shore in sight all the way. Following a zigzag course through the coral reefs and islands along this coast, almost barren of navigational aids, caused many anxious moments, especially at night.

Having safely passed Shab Amber reef, on which a large Arab dhow was stranded, we had to alter course for what is known as the Keary Reef which is less than half a mile long and can be distinguished only by breakers. We were anxious to sight the reef before dark as it was necessary to have a definite fix in order to clear other reefs ahead. A heavy sea was running, making it difficult to distinguish breakers, and we were forced to sail uncomfortably close to the reef in order to identify it. But at five that evening we cleared Keary Reef and headed toward the Wingate Reef Lights off Port Sudan. With the sighting of Sanganeb Reef Light it was clear sailing to Port Sudan where we dropped anchor at 6:30 A.M., April 5th.

Our experience of Red Sea sailing had convinced us that it would be very dangerous and slow to continue without the use of our engine, so we decided to stay in Port Sudan until it could be put in order. We were unable to find a proper repair shop, but the Port Engineer was kind enough to take it to his machine shop and have some work done on it. This took five days and then the engine was not right, but, as we were faced with a 700-mile beat to Suez, we departed on April 9th without further delay.

By the time we reached Wingate Reef it was dark and our engine had died. In order to save several miles we decided to go between Wingate and Sanganeb Reefs, but before we had made half a mile the wind dropped completely and a current gradually set *Intrepid* toward the reefs. It was not long before we could hear the breakers, and thus spurred on by danger, we made a last desperate effort to start our engine. Just as *Intrepid's* bow touched the first coral reef, and while we were trying to hold her off with a spinnaker pole, the engine came to life. It was running backwards, coughing and sputtering like the devil, but we managed to back

(*Continued on page 124*)

Beken & Son, Cowes

"Neptune," a 60-foot Norwegian double-ended cutter and Fastnet Race veteran, was hove to in the Irish Sea

Some Fastnet Reflections

Handling a Yacht in Heavy Weather and the Difficulty of Heaving To in a Modern Single-Masted Vessel

By B. R. WAITE

NEPTUNE has on former occasions shown some good bursts of speed and no doubt will again, but in failing to keep up 'round the Fastnet course in 1931 with many of the boats to whom we were allowing time, *Neptune's* afterguard had to find the answers to a great many awkward questions, as it was hoped that she would put up some sort of a fight against the American boats of her own water line length.

The answer to these questions is that the other boats proved too fast for us and in most cases sailed a better course. Following 'round in the tracks of other boats to whom one is allowing time is not the most exciting sport that ocean racing has to offer, but the weather conditions experienced by those boats that were still at sea on and after the night of Saturday, August 15th, turned a hopeless chase after faster boats into a highly interesting sail; one that dispelled a great many preconceived ideas and presented a host, possibly, of half-baked new ones.

At the start of the race as we came on the wind off Bembridge buoy several surprises were in store for us; the two American schooners *Mistress* and *Water Gipsy* belied the British belief that schooners were no good on a wind; at any rate, what these two lost to windward they made up in speed through the water. *Dorade,* in the gentle heave of the Channel, leapt into her stride and went marching away to windward like a 40-tonner. On *Neptune* we began to ask each other whether we ought to apply for a cutter allowance, or one for being a big boat — reflections now going definitely from bad to worse.

We caught up with *Jolie Brise* between the Longships and the Fastnet, and at 8:30 P.M. on the 13th, *Mistress* came tearing up on us from astern, passed to windward and disappeared into the night. How that schooner can go off the wind!

On Thursday night the wind freshened and the topsail was taken in to ease *Neptune's* bows which were making an unnecessary fuss. The topsail being to windward of the peak halliards, we had to shoot up into the wind before we could lower away. Here our luck was out. One of the leader snap hooks, employed only when the topsail is set over a reef, snapped itself onto the throat halliards. It was necessary to send a man aloft to clear it. Minus her topsail, *Neptune* added another half-knot to her speed, but the wind continued to freshen and it was not until we hauled down a reef that she commenced to slip along easily. With a following wind these flaring-bowed Norwegians do not like a press of sail, and I am beginning to wonder if *any* long-boomed cutter does when there is a sea to make her roll, however well they carry it with the wind forward of the beam.

On August 14th our barograph had fallen to 29.4. The wind that was now southeast had eased slightly, but the sky had a decidedly threatening appearance. At noon we shook out the reef, set the topsail, and chased off after *Jolie Brise* who, as usual, was enjoying the lumpy sea and was now ahead of us. We both rounded the Fastnet in daylight between 7:00 and 8:00 P.M. on the 14th.

Hauling our wind we could just lay the course, as the

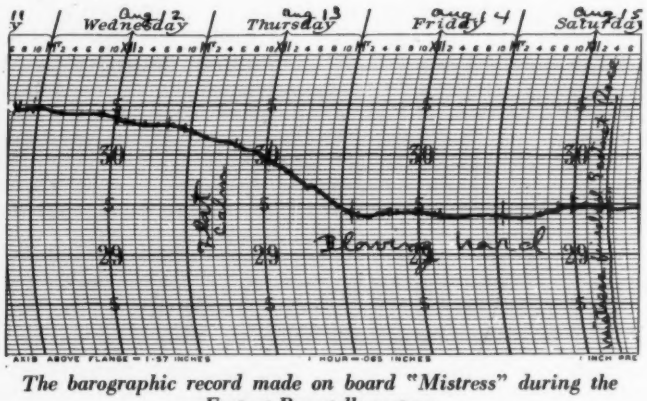
wind had veered to the south'ard. With a whole mainsail and topsail we settled down to a good sail back, speculating on the chances of our not having done so badly after all. The wind was now just the strength that *Neptune* liked and we pictured ourselves overhauling the whole fleet until someone remarked on the heavy swell that was coming in from the sou'west and a voice from below volunteered the information that the glass was falling like a brick. At 3:00 A.M. on the 15th we handed the topsail, and as the seas were getting rapidly bigger we set the spitfire jib.

Several vicious squalls gave us a broad hint that a whole mainsail was too much for her, so we hooked in the reef tackle and soon had the cringle down on the boom. But that first reef was never laced; the wire pendant parted, the mainsail blew out into a bunt and took with it the second reef pendant which we could see, with the aid of a torch, streaming out astern from the second cringle, well out of reach from the deck.

As *Neptune's* gallows are not of the permanent variety, it meant going out along the boom over the leach and re-reeving the pendant into the sheave on the lee side of the boom, all of which took time as the leach seemed to act as if it didn't want to help. Meanwhile, Old Boreas enlivened the proceedings with a few playful squalls during which there was a unanimous vote in favor of permanent gallows on a cutter.

Time, I suppose, goes very quickly when one gets into a jam, but we never expected to pick up Godrevy Light when we eventually got on our course again. Most of the boats in the tail of the hunt experienced a very strong easterly set, due no doubt to the approaching gale, and during the time that we had been hauling down two reefs and competing with the complications, we must have sagged off to leeward several more miles than we thought.

There was nothing to be done but to beat against the tide along the Cornish coast, and by 8:00 A.M. on Sunday morning we were off Pendeen Point, where the tide was beginning to slacken, but the wind had now reached gale force. We gave her a good rap full in towards Pendeen, let the spitfire fly, put the wheel over gently and hoped that no misguided sea would hit her bows at the wrong moment and stop her coming 'round. Luckily, all went well; we flattened the jib, left the staysail to windward and played about with the main until she was making about two to three knots through the water and was under control with the helm. Hove to on the port tack, we stood off over the Cornish Banks where the still rising wind over the ebb tide was raising a particularly nasty sea.



The barographic record made on board "Mistress" during the Fastnet Race tells a story

The wind had a deep moan, and was humming a fine tune in the rigging, but it did not have that high-pitched scream that it voices at strengths of between fifty and sixty. Of this I am certain, as our cotton staysail which has done three hard years of ocean racing would not have stood up to a wind of that strength. Since its experience over the Cornish Banks, this sail is full of minute holes, but it did remain a sail and gave service as such until we cut the chafed halliards and took it in at Plymouth. The seas are more easily described. Over this rocky patch (which is not on the direct course from the Fastnet so we had no excuse to be over it, more especially as the Admiralty go to the trouble of printing on their charts that in strong winds seas break dangerously over these shoals) the seas have a curious tendency to heap themselves up into a central peak. As they reach their maximum height the mass seems to check in its motion, the center comes charging down, say from a northerly direction, whilst the sides of the peak fall off N.N.E. and N.N.W. They required watching, as it was necessary to bear away for those breaking to leeward and luff slightly for the ones to windward; otherwise they would break too much on the beam and come aboard.

Whilst keeping an eye on the seas, we noticed a collier ahead. We took little notice of her until we saw that she was doing very little better than we were. We did not want to bear away and chance getting one of the seas broadside on, nor could we insist on our right of way and hit her amidships. The collier was either doing better than we thought or she got her propeller into the water twice running. At any rate, she drew ahead and we passed under her stern. She was a fine sight, keeping her nose doggedly into those seas, dipping her fo'c's'l under, with her propeller five or six feet clear of the water.

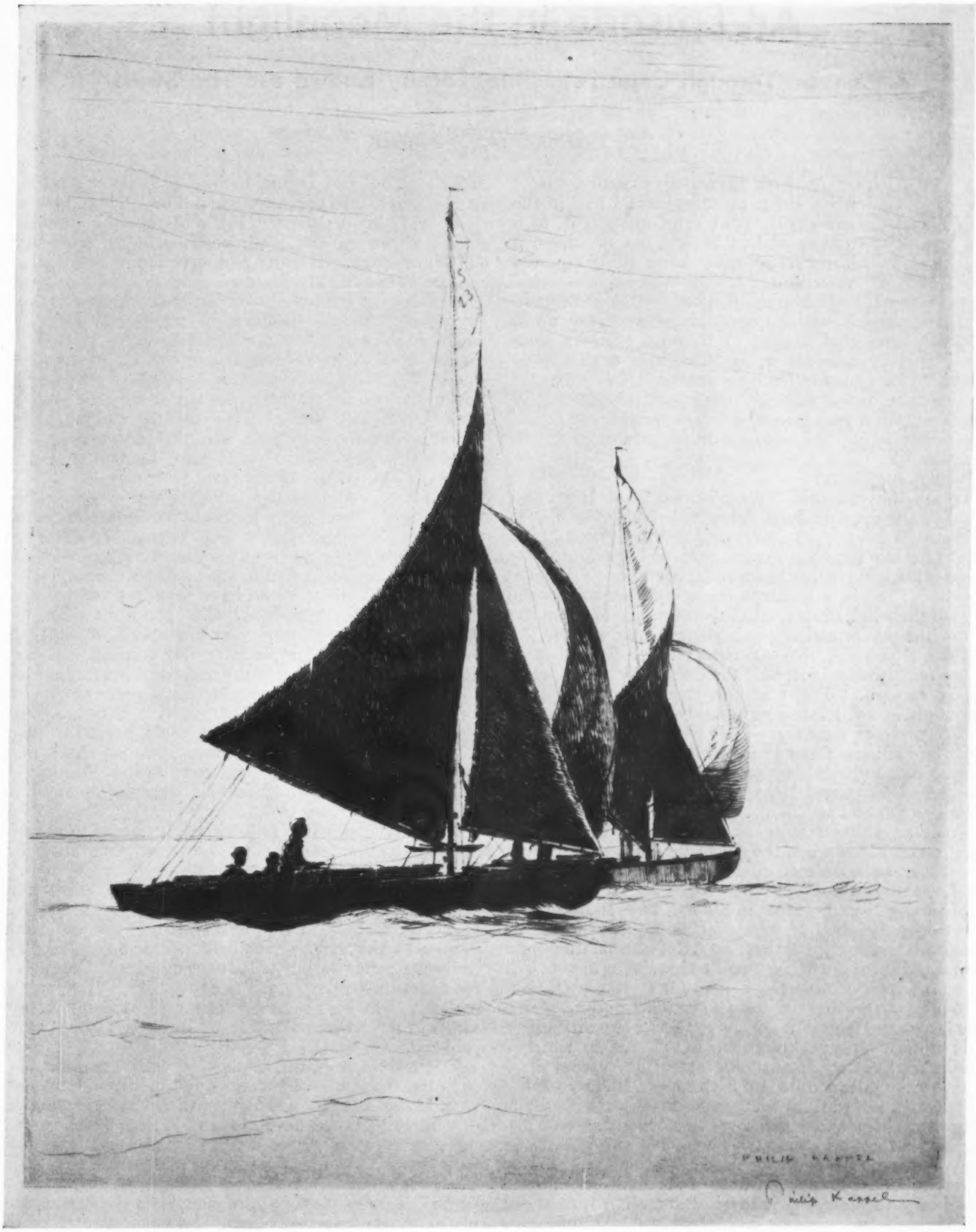
Under a close-reefed mainsail and staysail, and a spitfire, *Neptune* behaved extremely well. She forged slowly ahead, shipped very little water, and except on the few occasions when she fell over some particularly steep one, giving us the feeling when her flaring bows brought her up at the bottom that her runner would probably pull out of the deck and let the mast over the bows, she gave no cause for anxiety. The ebb tide out of the Bristol Channel assisted us in the right direction to the tune of a good three knots, so it was not long before we were out of these troubled waters.

Shortly after noon we had the Longships abeam where the backwash made the seas unpleasant, but as we were reaching free we were not amongst them long enough to make a close study of their formation. But as these seas have a tendency to come aboard on both sides at once it is an acquired taste to get close-up views of them.

Off the Lizard we were running dead, and at 3:10 P.M. a sea filled the cockpit. At 3:30 I went below to consult the tide tables. On coming up the companionway again I caught a fleeting glimpse of the watch on deck up to their armpits in water in the cockpit. I won't swear to the depth to which they were submerged, for the glimpse was only a fleeting one, as the same sea took me back to the saloon with it. Brown was the only one whose luck was out; he met the compass as it shot from the binnacle and received a couple of nasty cuts on the face.

The rest of the race was uneventful. We crossed the line at 9:45 P.M. that night and all turned in, and I doubt whether Gabriel blowing the last trumpet down through the saloon skylight would have wakened us.

(*Continued on page 126*)



(Courtesy of Schwartz Galleries)

RUNNING FREE

From an etching by Philip Kappel

An Episode in the Moonlight

A Passage Through Cape Fear Slue, Locally Known as "The Swash"

By FREDERIC M. GARDINER

IT HAS been suggested, casually, that I write about an experience I had in the moonlight. That word moonlight, as a matter of fact, would not be included if the suggestion were to be quoted verbatim.

It happened, however, in the moonlight, and there is, without question, magic in the word. You will agree that to say, "I kissed her in the hammock" hardly conjures up so delectable a picture as would, "I kissed her in the hammock in the moonlight!" To produce a *reductio ad absurdum* imagine your consternation if your best friend were to take you to one side and whisper, "I kissed her in the hammock in the sunshine."

Really, I ask you!

To say, for example, "We rounded Cape Horn and stood up the coast of South America — ," is of comparatively little interest. To say, on the other hand, "We fought for five days against the gales of Cape Horn, our vessel often lying on her beam ends; her decks constantly awash — ," while a common enough occurrence in the days of the windjammer, still leaves a tang of salt on the lips of the reader and brings a gleam to his eye.

Take, if you will, this experience under discussion. It lasted for fifteen minutes by the clock. The log records, briefly enough: "6:07 P.M. Sunset — clear weather — moonlight — moderate sou'westerly breeze, increasing, fairly good sea running — 7:44 passed flashing buoy No. 6 and entered Cape Fear Swash; 7:50 noted flashing buoy No. 2 not working properly — 7:52 passed buoy No. 4 — 7:59 passed buoy No. 2 and left Cape Fear Swash — Set course. . . ."

Could anything be simpler? And yet how inadequate! I am certain that when the suggester suggested writing about it no such skeleton outline was in his mind. Not at all, I venture to say.

Most of our experiences in life can be recounted in a few words, stripped of whatever glamour, excitement, danger, adventure, romance, tragedy, pathos they may contain. But there is no fun in that. What, you will agree, the reader or listener wants is to live with you, through your words, the sensations and emotions which you have experienced under a given set of circumstances.

It is not, however, our own experience to which I would particularly draw your attention, except as I may, through it, conjure up a picture of "The Swash."

There is, after all, to every episode its setting. Sometimes the episode overshadows the setting, but to "The Swash" an episode, be it as harrowing as some which may be recalled, is but an episode. The Swash is always there, hidden between its lines of breakers, a path to sanctuary for some, a path to destruction for others. Ships seek it, and failing to find it break up on the shoals; other ships pass through and beyond, and return — an everyday occurrence. It lies there within almost a stone's throw of the land, restless in its challenge; shifting, changing its depth and direction — everlasting.

Cape Fear Swash!

And beyond stretch, far out to sea, the sand bars of Frying Pan Shoals. The loss of the stately schooner yacht *Ingomar* last winter brought again vividly to the minds of yachtsmen the boisterous dangers of these shoals. Whatever criticism may be made of the navigation of the yacht, under somewhat harrowing circumstances, certainly nothing but sympathy can be felt for her officers and crew in their extremity; and nothing but delight at their eventual rescue, after hours of strenuous endeavor against the tumultuous elements.

That the same fate awaited us in our dash through "The Swash," had there been any considerable deviation from the course, goes without saying. We were, you may be sure, fully aware of our situation, and for the fifteen minutes consumed in the passage, thoroughly on the *qui vive*. While it would have been impossible for us to have held our breath for that period of time, our sensations at the end were very much as if we had. It is entertaining to contemplate, in this respect, the reactions which various men of my acquaintance might have during a similar experience. One, I am certain, who has comparatively recently gone "salty" and has built himself a large and commodious yacht, would brush it off as he would a fly. Nothing, perhaps, short of a typhoon would disturb his equilibrium — unless it might be a cat! Of which animal, strangely enough, he stands in mortal terror.

Here is, on the other hand, one who would have been up the rigging; another who, in complete boredom, would have lain in his bunk reading "The Concept of Philosophy" — or what have you. And I know from experience that my old man of the galley, "Vimmins," would have clung to the for'd rigging, eyes round and dilated to the whites, jaws clamped to keep his teeth from chattering — but without a murmur. I know — I took him across Barnegat Bar once, mild in comparison, and that was his reaction. All I could get out of him afterwards, however, was — "Yassuh, I was kinda jubious!"

There is a tale of the days before radio, gas buoys, or even lighthouses, which cannot fail to stir the imagination. In the midst of a heavy southeast gale, in the dead of winter and in the dead of night — than which there is no time so often selected for marine casualties — the lookout on the Cape Fear River pilot boat, hove to at the river mouth, saw distress flares to the eastward of Cape Fear. That is to say, of course, on the further side of the shoals from his vessel. The whole stretch of the shoals, including the Swash, was at the moment a seething mass of breakers. The captain of the pilot boat, advised of the flares, set sail at once. It is to his credit that he did not hesitate between the safer, but four times longer, course around the shoals, and the highly dangerous passage through the Swash. It is possible, even probable, that there was deeper water over the

Note: The following extract from the supplement to the U. S. Coast Pilot, Atlantic Coast, Section D, is of interest. "*Cape Fear Slue.* — The buoys are changed frequently, but they can not be depended upon to mark the best water. In ordinary weather, the channel is clearly marked by breakers on either side and can be easily followed *in the daytime.* Strangers should not attempt it at night. A vessel grounding here is in a serious condition."—*Editor.*

Swash in those days than now. Nevertheless, to take a ship through under the then existing conditions — I have seen the Swash in a moderate gale and I can assure you that I should, under those conditions prefer to "go around" — was a miracle of seamanship and nerve. He knew, to be sure, every inch of the way; he knew, of course, the ability of his vessel and his crew or he would, without doubt, have lost the vessel and probably all hands. If we found excitement in a moonlight passage, under comparatively favorable conditions, what grim excitement must have prevailed on that vessel in the dark fury of the storm. He reached his objective, a small cutter aground and breaking up, in time to save her crew. Having shown the nerve and seamanship necessary to navigate the Swash, it goes almost without saying that he should have been successful in the rest of his task.

I hope that I may never be faced with such a decision as he had to make. It was, I assure you, quite appalling enough as we found it. There were, if you have a passion for details, three of us on board a small schooner. She boasted forty-three feet on deck and drew four and a half feet of water. The skipper, the mate, Sam, and the cook, a short and wiry black boy full of enthusiasm and culinary art, formed the crew. We had been standing up the coast all day, from, in fact, the early hours of the morning. It was, if I may say so, a day for standing! The wind was fresh westerly backing to southwest, with a good sea running and the crests of the waves breaking under our counter. We carried full sail with our sheets well started, and we reveled in the brilliant sunshine, the lively motion of the boat; in the sight of the ever-changing white smother of foam under our lee, and in the hypnotic sound of the rushing waters.

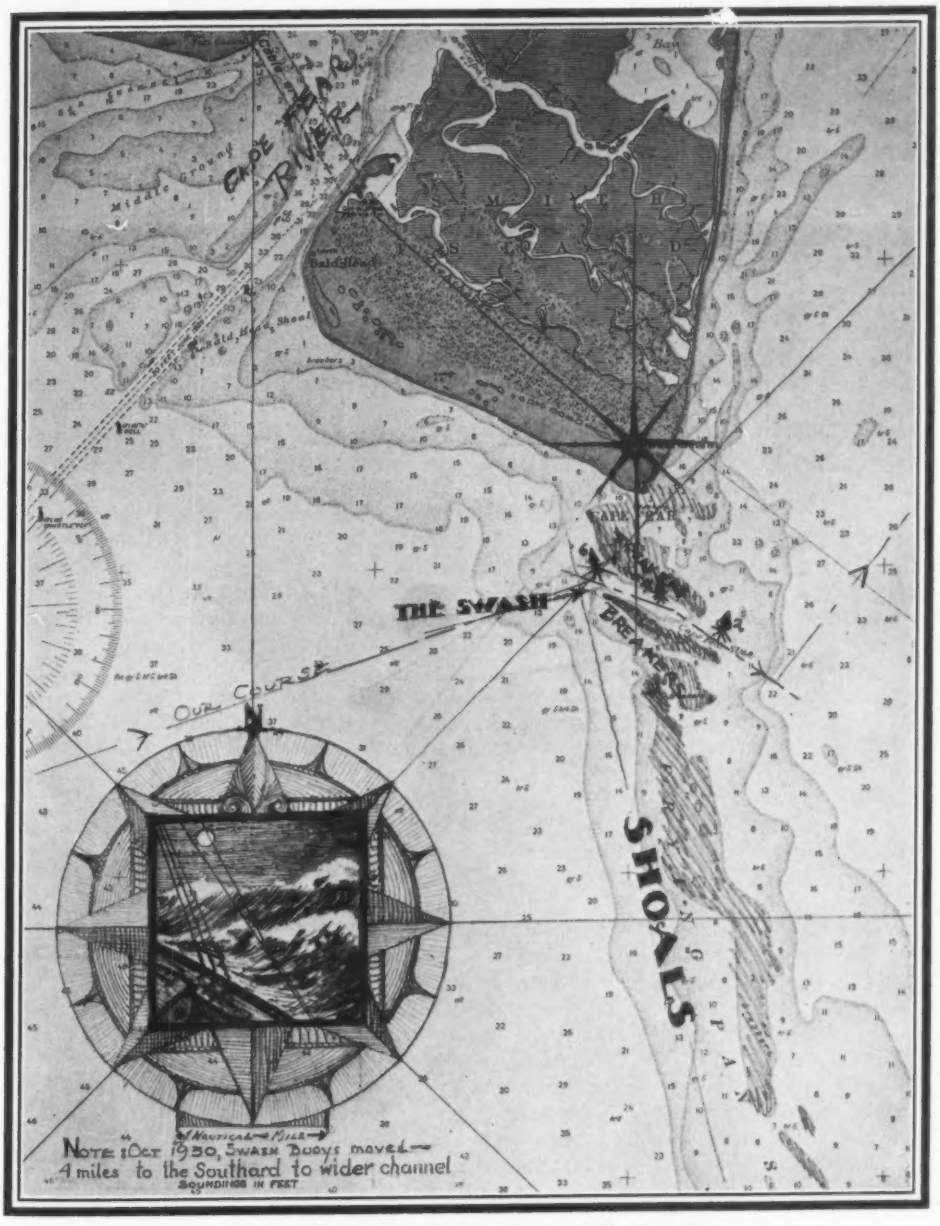


Chart of Frying Pan Shoals, showing "The Swash"

We had determined, before setting sail, to run the Swash, and we had estimated, with the usual optimism as to speed based on the distance covered in the earlier hours, that we would reach the Swash well before dark. We did not, as a matter of fact, disturb ourselves when the breeze flattened in the early afternoon, but sprawled about the decks, entertained by music from our radio, comfortable and content and confident that, with the use of power, if necessary, dark would see us well beyond the only dangerous spot on our course.

We had, therefore, rather a rude awakening when at sunset we discovered that we were still too far to the west'ard of the Swash to reach it before dark, even with the use of power; and in spite of the fact that the breeze had freshened again and was, at that moment, "blowing the tops of the waves at us." There was, however, as our log records, a fine bright moon in the sky and, while I confess that the adventure of the Swash under the somewhat fickle conditions of moonlight presented a different aspect from a daylight passage, we did not change our course.

By the time we were off the twinkling buoys which mark the entrance to Cape Fear River, night was upon us and the waters had taken on that blackness which moonlight seems to intensify; and the white crests of the following waves in their very brilliance turned, by contrast, the intervening hollows to an even deeper hue.

About moving waters in the moonlight as seen from the deck of a small boat in the midst of them, there is an awe-inspiring fascination; there comes, with the setting of the sun and the fading of the afterglow, a swift change over the face of the sea; it becomes colder, more ominous; the rush of sound comes closer to one's ears;

the breaking crests seem to reach out with a more predatory grasp; the surrounding and tossing black masses seem to shut one into a perilous and ever narrowing circle. At the same time, the cold, pale dignity of the moon projects into a more distant and less tenable sphere all the familiar objects, all the familiar sounds which, in the daytime unheard and unseen, still seem close at hand; your ship becomes, in short, your world, the only remaining symbol of your existence, tossed on a precarious and uneasy element.

So we approached the Swash — from the rear, if I may use the expression. That is to say, that, looking toward the Swash, the breaking crests, the "fronts" of the waves, the more formidable, if I make myself clear, aspect of the sea was away from us, hidden, to some extent, by the smooth and dark and sloping hindquarters of the billows which all the time rose, steeper and steeper, as we approached the shallower water ahead. In the ghostly light of the moon, too weak to outline objects at a distance, all basis for perspective had deserted us, so that the flashing lights of the buoys, which seemed innumerable, appeared to be equally distant from us and surprisingly close aboard. You have, without doubt, had the experience. It was confusing. It was difficult to distinguish between the lights which marked the entrance to Cape Fear River and those which marked the channel to the Swash. As it was imperative to be certain, we hove to for a moment and checked our bearings, relying for the most part on the brilliant flash from the towering lighthouse on Smith Island. The correct buoy, definitely ascertained, became at once the most prominent of all as if, by our very selection, we had endowed its flash with additional brilliance. We started sheets and headed for it. It was, I can assure you, with somewhat the same sensations one might have at the commencement of his first airplane flight, that we bore down on the buoy and marked the ever-increasing power of its light as we drew near. For we knew that, once in the Swash, there would be no turning back — having ventured, one must keep on; to turn in that narrow lane at night would be only to invite disaster.

We passed the buoy close aboard on the port hand and hauled our wind to head for the second buoy. Immediately the entire aspect of the affair changed: the motion of the schooner, the form of the sea, the sound of the waters. It was as if, from comparative security we had plunged into a roaring maelstrom, and I noticed, in spite of the hubbub, with that small portion of my consciousness not otherwise engaged, that we had forgotten to turn off the radio. I could not be bothered, and I suppose, although I have no recollection of it, that the poor thing poured forth throughout that turbulent passage, upon the unheeding ears of the crew and the elements, the latest and most melodious musical selections. With the following sea and wind, matters had been comparatively comfortable. Now, with the sudden change of course and with the consequent shift of wind and sea from aft to abeam, the schooner lay over, the wind took on a hitherto unrealized force, and on the weather side the waves towered over us, breaking in a smother of white foam which gleamed in the moonlight; threatening, to our spellbound imaginations, to bury and overwhelm us. The air seemed full of sound, deafening; and the moon, the buoys, all tangible and fixed objects had receded to an infinite distance, leaving us only the sensation of bewildering sound and motion, of bright darkness, and of imminent destruction.

I remember that I crouched at the wheel, tense, gripping the spokes and twirling them to meet the heave and lurch of the vessel. I shouted — I am sure my voice could have been heard ashore — to Sam to keep his eyes on that buoy (the one ahead, the second one).

"Whatever you do, Sam," I bawled, "don't lose sight of that buoy!"

And his calm voice replied, "I've got it — you're heading just right."

We were heading just right! But in the interval between one flash and the next there gaped an anxious moment. We were, as a matter of fact, between two appalling and apparently unending lines of marching combers, so close, it seemed to the eye, that a hairbreadth's deviation from the course would have plunged our vessel into one or the other. It was, if the imagination permits, like a Welsh Rarebit nightmare in which one is pursued by stampeding and relentless mountain ranges, tossed high on a ridge at one instant, tumbling, at the next, into an apparently bottomless valley.

It was a thrilling and awe-inspiring spectacle. If it was, obviously, impossible for us to have held our breath during the entire passage, it is equally certain that we did hold our breath as we watched the breaking of each wave and felt the sudden heave of the boat as she rose and tossed while the wave passed under our keel.

That it — our keel — was at no time far from the bottom is evident from a glance at the chart. That it was perilously close at one instant, I am convinced from the sudden and sidewise lurch that the schooner gave. There is, you will agree, no more harrowing experience for a sailor than to feel the heart-rending thud of his keel against the bottom in a seaway, unless it be, perhaps, the awful suspense engendered by the conviction that at any moment it may happen.

We were all conscious of that lurch, for the cook, forward by the rigging, looked aft with a foolish grin, while the whites of his eyes shone like two glistening agates in the pitchy blackness of his face; and Sam and I turned, for a second, to stare at each other with a wild surmise, while I bore down hard on the wheel to head the schooner into what, I hoped, would be deeper water — to head her, for that instant of eternity, toward the breakers on our weather side — and then with a breath of relief, to head her back toward the reassuring flash of that buoy which, in the sensation of infinite duration of time caused by sustained excitement, it seemed we would never reach.

It was ordained, however, that we were to reach it after all. So intent were we, as a matter of fact, upon reaching it, upon holding our course at all costs, that we had ceased to pay attention, or to give thought, to what lay beyond. It was, therefore, with a start that I heard Sam sing out, just before we turned the buoy. "Hey, Skipper — where's that third buoy?"

It had disappeared! Where, but a few moments before, its intermittent flash had assured us of a leading mark — there was nothing! It had ceased to flash, it had sunk, it had been swept away, it had blown up — God knew! But it was, at any rate, not to be seen; and before us stretched a moon-swept, foam-swept waste of unmarked waters. That was a startling and unlooked for eventuality!

"Get the glasses, Sam!" I yelled. "See if you can't pick up the shape of it — it must be — "

But Sam had already dived for the glasses and had crept forward the better to see.

"Can you see it?" I shouted, for we had, by then, passed the second buoy and I was steering "by guess and by God" in what appeared to me to be the deepest

(*Continued on page 134*)

The Stars Come of Age

Now Twenty-One Years Old, the Stars Enter the Olympics

By

CHARLES E. LUCKE, JR.

SPURRED on by the prospect of competition in the Olympic games for the first time, yachtsmen of the International Star Class the world over are busily preparing for next summer. In view of the fact that the yachting events of the Tenth Olympiad at Los Angeles will be held early in August, many of the far distant fleets must hold their eliminations in May and start tuning up before the snow vanishes from the streets.

During 1931, when it was celebrating its twentieth anniversary, the Star Class enjoyed an unusually large expansion, especially abroad. Two factors have led to the remarkable popularity of the little Gardner sloops on the Continent, namely, the change to the taller, inboard rig, and the prospect of Olympic competition. Hitherto restricted to Eight-Metres, Six-Metres, and Monotypes, the Olympics offered scant opportunity for the skipper with vast enthusiasm but limited funds.

The number of nations to be represented in the Star Class series at Los Angeles next summer may easily set a record, for at this writing the list seems likely to include the United States, France, England, Germany, Cuba, Canada, Venezuela, the Philippines, Spain, Portugal, Switzerland, Sweden and Denmark. In all of these countries the Stars are now firmly established. Representation from other nations — Norway, Finland, Holland, Japan, Australia and Morocco — is probable, for interest has been shown in each of these countries and in some cases boats have already been built. Moreover, rulings on the status of such existing fleets as those in New Zealand and the Barbados may make the entry list even larger.

"Talita," one of the French Stars, showing the modern high rig adopted by the class in 1930

E. Levick

The original rig of the Stars, with its high peaked gaff

With some 900 sloops scattered through all these nations, the question of elimination is a very real problem. In the United States it is a colossal task to pick one representative from over 600 Stars. That no fleet or individual may be denied representation a most comprehensive system of selection has been arranged.

Each American fleet will choose its best boat by competition during May and early June. Four semi-finals will bring these local fleet champions together. What should prove the largest and probably the most strenuous series will be the Atlantic Coast Championships, to be sailed on Narragansett Bay, by virtue of David Atwater's triumph in *Moonshine* last summer when he removed this fixture from what had looked like a permanent berth in the trophy room of the Pequot Yacht Club, at Southport. The Atlantic Coast semi-finals will start about June 15th and will be held near Warwick, R. I. The boat winning on Narragansett should have better than a 25 per cent chance of representing the United States, as the competition along the Atlantic seaboard is more highly developed than anywhere else where Stars race.

The Great Lakes Championships will serve to select the challenger from this section and will be held during the third week in June, either at the Illinois Valley Yacht Club, at Peoria, home port of the Bradley-Howland combination racing *Majella*, or at the Vermilion

Yacht Club, on Lake Erie. New Orleans, as usual, will hold the Gulf Coast Championships over the Southern Yacht Club's course on Lake Pontchartrain about the same time, while the Pacific Coast Titular Series, which will include Hawaii, will be run off early in July, at Santa Barbara.

Copyright, Ch. Cresp, Cannes

Stars of the Cannes, France, fleet, which race on the Mediterranean. This shows the boats with the early jib-headed rig

Three divisional winners will then be shipped to Santa Barbara, there to meet the Pacific Coast Champion in the finals, the winner of which will surely be worthy of representing the United States. The American finals will be a three-race series, starting July 17th. This will allow about a week's time for tuning up prior to the start of the Olympics.

France will hold eliminations which will be second only to those on this side of the Atlantic, for the eight fleets sailing under the Tricolor constitute the second largest national group. The French boat will be chosen at St. Jean de Luz, in races which will include contenders from the eight fleets, all of the past three years' vintage: Toulon, Marseilles, d'Arcachon, Cote Basque, Villefrance sur Mer, Cannes, Paris, and the newest fleet, the Seine Maritime, about fifty miles from Paris.

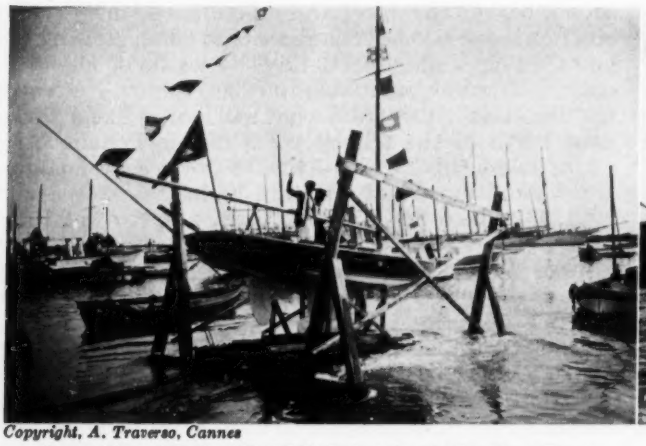
Choosing entries from other nations should not prove so difficult as the number of fleets and boats is more limited. The Cuban entry will surely be selected at Havana; that from Portugal, at Lisbon; from Spain, at San Sebastian; from Switzerland, at Lake Geneva; from the Philippines, at Manila; and so on. Since the Scandinavian development has occurred wholly within a year's time, it seems probable that Sweden will have but one fleet, that at Stockholm, and Denmark likewise only one, at Copenhagen, from which to select representation.

Germany has the Norddeutsche Flotte, but just where eliminations will be staged is not definite; probably at Kiel. More fleets of Stars are expected shortly in Germany but whether any can be organized in time to participate in the necessarily early racing is doubtful. There is also considerable doubt surrounding the acceptance of Venezuela's entry from Lake Maracaibo, as most of the crack yachtsmen there are either English or Americans who would not qualify under the Olympic rules pertaining to citizenship and naturalization. Canada, entitled to compete in the Olympics in its own right, has fleets at Quebec and at Vancouver, British Columbia. The latter is the more highly developed and will undoubtedly represent the Maple Leaf sailors.

Interest in Stars is growing at Oslo, in Norway, and Helsingfors, in Finland, plans having been shipped to each country, and in Japan a fleet is expected at Kobi. Scattered Stars in Morocco, Australia, Holland, and in the Virgin Islands may be the nucleus for new fleets, but not much is expected from these locales by next summer. At Batavia, in Java, however, Commodore Van Asprin has three or four boats racing and if the fleet is chartered in time a boat from these waters would represent Holland.

The very prospect of Olympic competition is proving as much of a bracer in the United States as elsewhere. New fleet possibilities at present include Dallas, Texas (a result of a fleet having been formed a few months ago at Galveston); Ocean City and Stone Harbor, New Jersey; Wilkes Barre, Penna. (on an artificial lake); New

(Continued on page 144)



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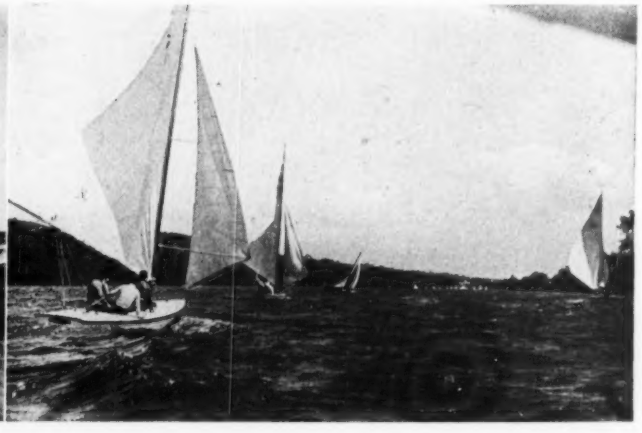
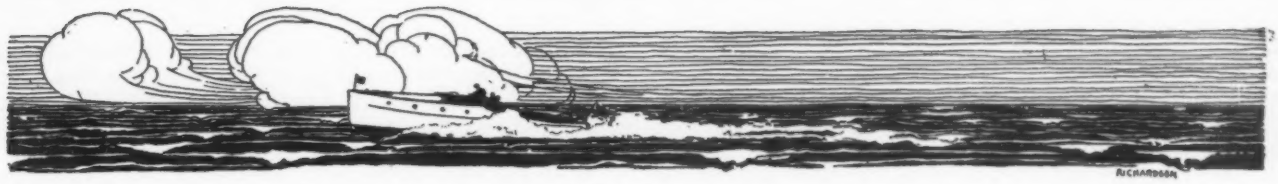
Launching of F. Conill's "Kiki," first Star in Southern France



Racing in the Star Class on the Seine, below Paris



And What About Engines?

By HENRY CLAY FOSTER

KALEIDOSCOPIC changes which are taking place in modern power-driven pleasure boats make it fascinating to note the progress that comes out of them. That we are in the midst of the most rapid development in the history of marine propulsion as applied to small boats is certain. We have already noted that out of a quarter of a century of racing has come the new stern installation, bringing in its wake changes in design, increased efficiency, and no loss of seaworthiness.

But what of marine engines themselves? Are they undergoing any changes worth recording? The return of the 2-cycle design to popularity in the outboard classes was a development which astonished everybody and launched most of us into prognostications, few of which have materialized. Three seasons back we were all expecting the outboard engine to change to the 4-cycle design. As such, we visioned it as the ideal power plant for small cruisers which would have wide after decks under which the outboard motor would do its work, leaving the rest of the boat clear.

The outboard engine has found a place as a power plant for the small cruiser, but it still remains 2-cycle in design and the cruisers are somewhat smaller than we expected. We had in mind cruisers up to about 30 feet for use with outboard engines, but their length now stops at about 22 feet. It is true that this design — the outboard cruiser — has not developed as far as it might have because of the appearance of the various devices making stern installation of inboard power plants possible, thus effecting practically the same result, *i.e.*, removing the motor from its too prominent social position amidships.

Portability, and the fact that heavier fuel consumption has not had the deterring effect that was expected, account for the continuance of the majority of outboard motors as 2-cycle types. The lightness of weight made possible because of the relatively small number of parts in this type, has compensated for the additional cost of fuel — or rather of lubrication.

The threat of the outboard engine has, however, forced manufacturers to develop to a higher state of excellence the small 4-cycle inboard motor, a type which now appears on the market in a goodly number of high-speed, smooth-running models such as only competition of a different type of engine could evolve. These small 4-cycle inboard motors have higher compression ratios than their predecessors and deliver more power in proportion to the piston displacement. So successful have they proved that at present no development of inboard 2-cycle motors for everyday use to compete with them seems probable.

There is, however, a lot of talk among racing men about 2-cycle inboard engines for competition on the race course — and for that purpose only. It is true that there is also a tendency in power boat circles today to standardize racing craft in classes as to hull restrictions and stock engines. There are, also, certain development classes in motor boat racing which allow plenty of latitude, and these there always will be because of the contribution they make to stock designs that spring from them.

Today we have outboard 2-cycle motors of, say, 60 cubic inches piston displacement which produce approximately 50 horsepower. The thought occurs to at least one prominent marine engineer, that it is entirely feasible to build a 2-cycle 8-cylinder opposed type inboard motor of similar materials which would deliver about 100 horsepower from 120 cubic inches of piston displacement, thus doubling the number of cylinders and the power. What such a motor would do in the 125-cubic-inch class against 4-cycle inboard motors would be long remembered, to say the least. And yet it can be done. Such an engine would work better in the protection of an inboard position, and the absence of valves (save the rotary ones), of springs, of cam shaft, as such, would make a very light-weight inboard engine indeed. It would weigh, including reverse gear, less than 225 pounds, would be short in length, and have a low center of gravity.

Such an engine could be built cheaply as a racing engine and sold for a comparatively small price. And what speeds it would give to hydroplanes of about the 125-cubic inch size! They would soon be stepping well above 50 miles an hour. Is it any wonder, then, that such a racing power plant for inboard use in small speedsters is regarded as likely to appear within the next few seasons?

In competition the cost of operation of a 2-cycle power plant is not a major consideration. Power is the main thing, and reasonable dependability. The simplicity of the modern 2-cycle outboard engine more than offsets what trickiness the design in racing models involves; we often see a youth quickly fix his motor as the race starts and overhaul the field in a brilliant burst of speed with what was but a few minutes before a balky motor.

It is, after all, in lubrication expense rather than in actual fuel that the weakness of the 2-cycle engine lies. The cost of five gallons of mixture for it is distributed something in this wise: four gallons of gasoline costing about sixty cents — plus one gallon of lubricating oil costing not less than one dollar. Now this last item makes a difference when the cost of operation of this design is considered in contrast with that of the 4-cycle motor of approximately the same power. Although the 4-cycle motor has a greater number of moving parts, this type consumes practically no oil while using four gallons of gasoline. And the difference is enough to keep the two types in their respective spheres of usefulness.

Some crystal-gazers declare they see the time approaching when all marine engines — even for everyday use — will carry superchargers, thus producing far greater power for a given piston displacement than we

have ever obtained before. But this is a bit of optimism reminiscent of the naïve remark: "Ain't science grand!" According to the most practical minded marine engineers, it isn't that grand yet — and there seems to be small likelihood that the supercharger is as near as all that, though nobody, in this day and age, would wax dogmatic in denying its possibility. But the probability lies in another direction.

It is true that we are constantly demanding more power from any given piston displacement. We are more and more intolerant of the engine as to size, noise and position in the boat. Superchargers on marine engines have been tried out on certain "unlimited" racing classes of hydroplanes; these seldom now appear on a regatta program because they haven't "come through" either as to dependability or numbers.

In the Harmsworth Trophy Race, and such contests, in which there is no limit on anything in power plant, the supercharger is now making its début with striking results. It may be possible that a new principle will be evolved, or a known one developed, which will make the supercharger less tricky and more reliable, but with the results as meagre as they are now, it hardly seems likely in the near future.

On the automobile race track supercharged motors of the 91½-cubic inch class are said to produce as high as 120 horsepower — at about 7000 revolutions per minute, using special fuels, high compression ratios and adjustments so delicate that the trickiest outboard 2-cycle motor cannot be compared with them. Only recently, at the meeting of the Gold Cup Contest Board, the question of allowing superchargers in that famous race which has done so much for stock motor boat development, was discussed and decided in the negative.

Higher compression ratios and changes in keeping with this tendency seem to be the line of development for marine motors. It is, of course, obvious that additional power can be obtained from more highly compressed fuel when exploded. The high-speed types of motors can carry higher compression without detonation than slow speed motors. It is also more practicable to carry high compression in cylinders of small dimensions than in cylinders of larger bore.

For instance, let us compare two motors of extreme types of about the same horsepower rating. Both are 6-cylinder models. One is a valve-in-head slow-turning motor of about 6⅜ inches bore with 8-inch stroke. It will pull at 550 r.p.m. without detonation at full throttle. Its compression ratio is only 3½-to-1. The other motor has a bore of about 3⅜ inches and a stroke of 5 inches, with its rating at 3000 r.p.m. It has a compression ratio of almost 6-to-1 without detonation.

The slow-speed motor uses over .7 of a pound of fuel per horsepower hour, while the high-speed motor uses only about .55 of a pound of fuel per horsepower hour. Thus the fuel consumption of the slow-speed motor is approximately one-third more than that of the high-speed model.

In flexibility the high-speed motor is also far superior. From its peak r.p.m. it can be throttled down to about 300 or 400 r.p.m., or to about one-eighth of its top speed. The slow-speed motor can be throttled down only to about one-fourth of its top speed. Thus, the flexibility of the high-speed motor is twice that of the slow-speed motor.

The high-speed high-compression motor is cheaper to build, lighter in weight, smaller in size, lower in center of gravity and cheaper in price, in most cases. It is true that it does not last forever, but when it must be rebuilt or replaced the slow-speed motor with its longer life is also no longer brand new and has cost more originally. It is for these reasons that in 1931 we have seen more motors of this design appear. And in the 1932 Motor Boat Show we shall witness the advent of still more new models of the high-speed, high-compression types.

With this type of motor the reduction gear is becoming more and more an integral part of the power plant, instead of an accessory. Also, because we want more power for express cruisers and big, heavy runabouts, we are tending now toward multi-cylinder motors. The question of noise from a marine motor is still a prominent one because, unlike the automobile motor, it is contained in the boat and cannot spill some of its noise out through hood vents and other openings to the outer air. Therefore, the high-speed motor, with small bore and higher firing frequency, not only gives less vibration to the hull, but more of a hum and less of a roar while in operation.

So we find a tendency now to more small-bore cylinders to get the necessary piston displacement to produce sufficient power for the big express cruisers, day cruisers, commuters and other speedy power craft. We have long since become accustomed to the six-cylinder marine motor, and it is a well balanced standard model. Now, however, needing more cylinders of small bore, we are coming to 8- and 12-cylinder designs. Perhaps we may even see 16-cylinder engines in time, although engineers declare that the practical requirements are met in most instances by the 12-cylinder motors. These motors of more than six cylinders tend toward "V" design, for which there are many strong arguments and few bona fide adverse ones.

There are just two supposed disadvantages of the "V" type of motor. The most often heard is that there is difficulty in controlling the oil in the cylinders, especially on the side of the up throw of the crankshaft. The old story of oil being thrown up into the cylinders today is ridiculous, because of the long success of the oil control rings which make it possible today for radial aviation engines to function perfectly through trans-oceanic flights. The other objection to the "V" type motor is that the weight of the pistons wears out the cylinders on the lower side.

This is interesting to think through. Let us assume cylinders of about 3¼ inches in bore with a 5-inch stroke and pistons of the usual alloys. The weight of such a piston and part of the rod would be not more than about 3 pounds distributed over about 12 square inches — or about ¼ of a pound to the square inch! If it were not for the heat such friction could be lubricated with water and eliminate the wear. Now, figure what the pressure is on the sides of all cylinders in whatever position — vertical or "V" — due to rod angularity. It is simply hundreds of times as great!

The advantages of the "V," "W" and opposed types of motors are many and positive, on the other hand. The short crankshaft gives greater strength, there is less weight to the engine, and there is the very desirable low center of gravity, an important factor in boat balance.

It is to such multi-cylinder, high-speed, high-compression motors that we are now tending, with reduction gears built in, although the gear ratios may be lower when used in runabouts of the larger and heavier models. In day cruisers, cruisers, commuters and other heavy types, the gear ratio would run as high as, perhaps, 6-to-1. The vertical cylinder design in multi-cylinder models is not practical for power craft in most instances, as the length becomes almost twice that of the "V," and the center of gravity is consequently higher.

"Gypsy" A 26-Footer

+ + +

Part II—An Inland Cruiser Which Any Carpenter Can Build

+ + +

By

EDWIN S. PARKER

"Gypsy's" pronounced sheer and ample freeboard forward make her both smart looking and able

THE bevel on the sides must now be planed true so that the bottom planks will fit exactly. Plank to be 2″ stock planed to 1⅛″. Bevel the plank a very little and fit closely on inside so there will be a joint on outside only.

Start planking at the stern, and use two keelsons, as in photo. There should be two screws to a side-plank and two to chine battens on each side. Also two screws to each keelson. Bore for bung, or putty as before.

The bevel on the sides must be painted before planking to keep the water out. I used marine glue but could get none soft enough to squeeze into place. Another time I would use tree tangle-foot which stays soft on a branch for over a year, so it should stay soft indefinitely in a joint. Clean off excess with kerosene. A boat builder would be horrified at the idea, but we can't do the job of a professional, and it must be tight.

As you cut the plank to length, use a gauge to the flare of the sides as a mark to cut them by, so there will be less work planing the sides true.

Make template to curve of bottom and cut centerboard box to this curve by band saw, or by hand, and true up with plane. Assemble box, bolting together with pieces of rib to separate sides 1¾″, with ⅜″ bolts. Set in position. I should add that only the two bottom pieces go on at first, so they will go over mold No. 9.

Teredos are apt to get into the inside of a box where it cannot be easily painted. I nicked the plank across the grain so that it looked like a chopping board, using a light axe, and soaked it with creosote. This chopping allowed the creosote to penetrate in from the ends of the grain. The latest method is to drive copper and galvanized nails alternately, an inch more or less apart. The galvanic action keeps the teredos out. I learned this later.

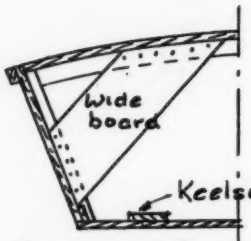
Bung or putty over screw heads, setting bungs in white lead to hold in. Paint bottom with copper paint direct on the wood without priming. Caulk with cotton caulking. I prefer not to putty the seams, as putty is squeezed out as the boat swells, forming ridges across the bottom. Caulk with hardwood wedges if you have no regular caulking iron, using strong putty knife in close joints. Take care not to drive caulking too hard.

The broad deck with generous bulwarks provides ample space for day sailing parties

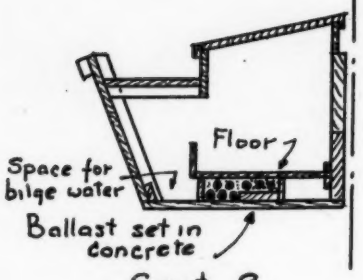
Turning Over

Block up in two places so that the boat will bear on blocks when turning over, instead of tearing off ribs. I took a hitch over a shed, so that when the three men helping me lifted the boat up, I could hold her from going over till they were ready to ease her down. The rope helped ease her down too. It was easily done. The boat at this stage is not very heavy. Paint the inside at once before she gets full of chips and sawdust.

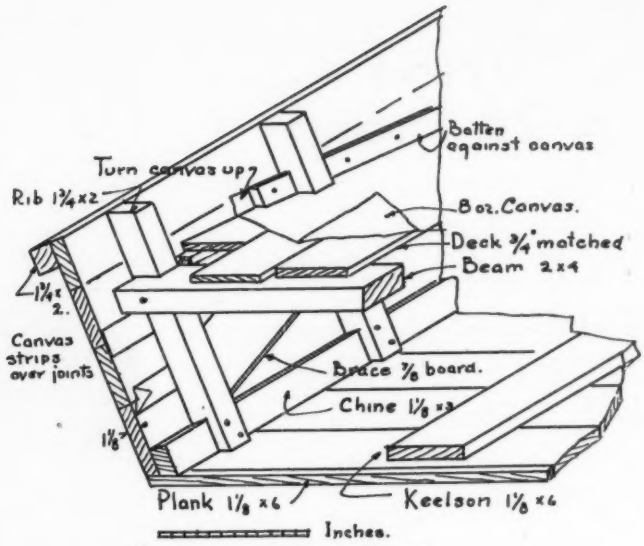
Put in deck beams progressively up to each mold before removing mold, so boat will not spring together. For the flat deck use 2 by 4 flat. For the crowned deck forward, use beams, band-sawed to curve, from 2″ lumber, the curve being a couple of inches in the



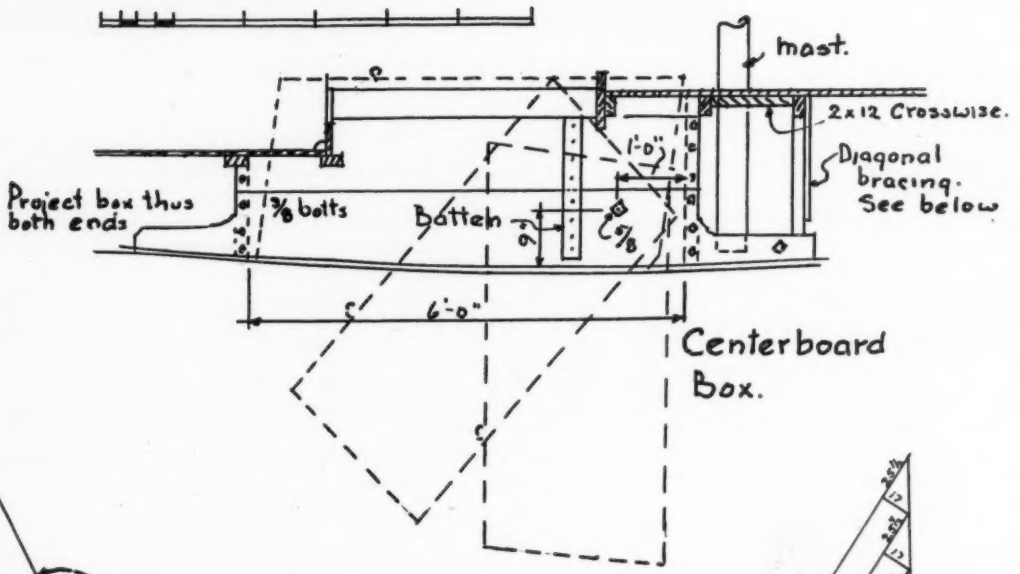
Diagonal bracing.
Sect. 6, for'd of mast.



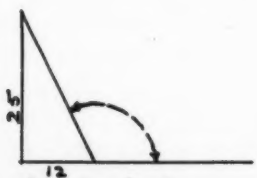
Sect. 9.



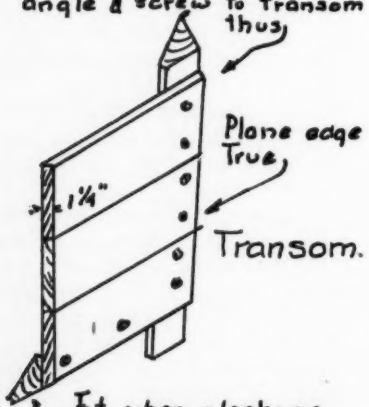
Detail at Flat Deck.



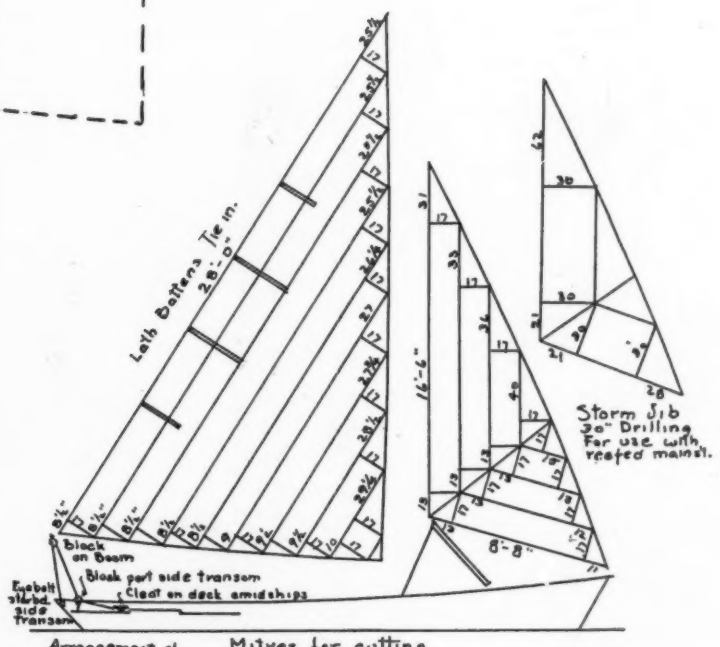
Centerboard Box.



Angle between transom & side.
Cut corner brace to this angle & screw to transom thus,

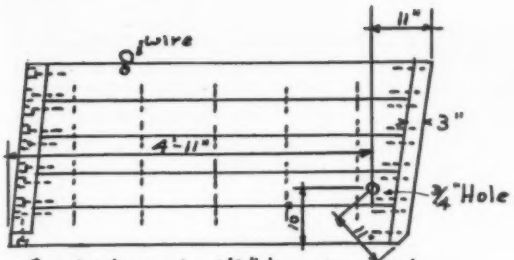


Fit when planking.



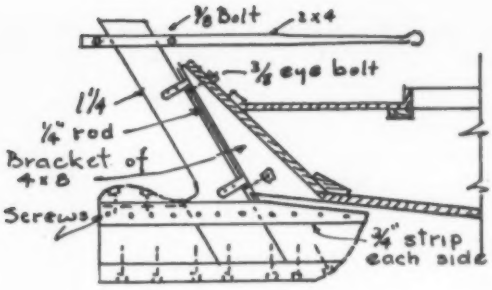
Arrangement of Main Sheet

Mitres for cutting Sails.
6 oz. canvas 13" wide.
Splice halyards in loops Fasten peaks of sails to splices. Thus no long ropes to coil on deck.

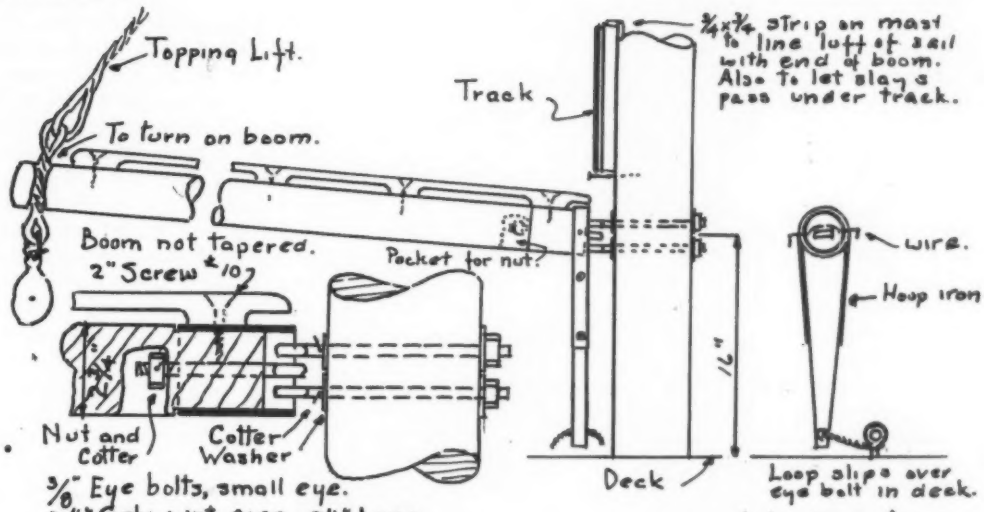


Centerboard 1¼" hard wood.
2 od nails in cleats, heads sunk.
3 od dowels, heads cut off.

Centerboard



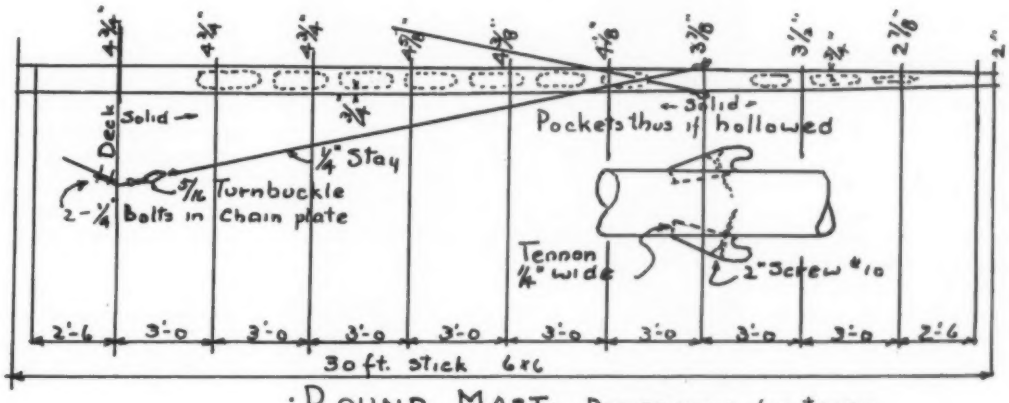
Rudder



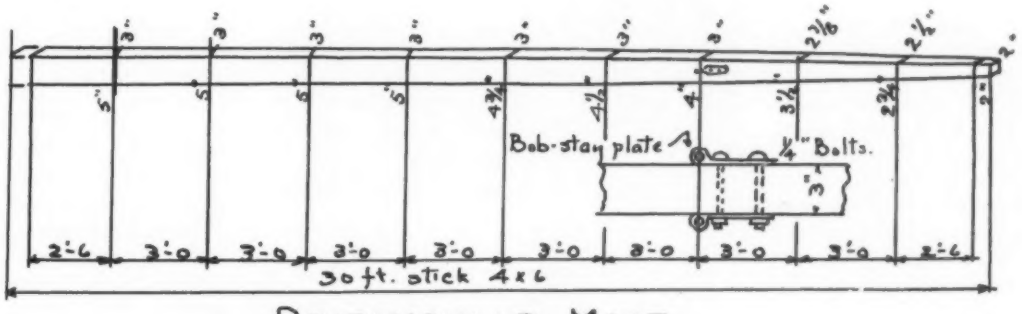
⅜" Eye bolts, small eye.
2½" Galv. wrt. pipe 3⅛" Long.
2" Screw #12 tied in eyebolts for pin.

Winding Arm.

· REEFING DEVICE ·



· ROUND MAST · Dimensions for taper



· RECTANGULAR MAST ·
Dimensions for taper

width. Make a template to mark them. Cut 10″ or 12″ board into braces to nail to ribs and deck beams at each rib, if possible. They show in the photograph on the after deck beams. Forward there is a thorough bracing at section 6, forward of the mast, shown in the drawing. These braces are very simple and are very valuable for stiffening.

Decking Over

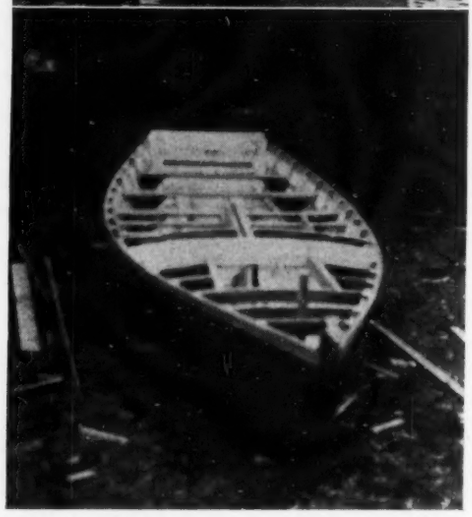
Putting the deck on is a case of simple carpentry. Fasten rough cleats on sides between ribs to hold edges of deck boards firm. To lay the canvas, paint the deck with floor paint heavily, lay canvas with lapped joints and smooth out with a small block. Let dry in place, tack selvages with long galvanized tacks, and paint over with thin paint. Turn up at all edges and cover with molding. Fill fittings around ribs with white lead. There must be reenforcement where the mast goes through the deck. Crown a 2″ plank and nail securely through deck into it, with grain running across boat. This gives two-way grain and heavy wood here. The forward post of the centerboard box must be nailed to the deck beam to hold box in place at the top. Make rudder, tiller, and centerboard as detailed.

The Mast

In the old days the mast had to be round for the hoops. Now we use a slide for the sail, and still make it round. This did not occur to me until I had done a lot of useless work on mine. Also, we can easily stay the mast sideways, but backstays are a nuisance. The obvious way to make a modern mast is to make it rectangular, with the long dimension fore and aft. Then it is properly strong in each direction without backstays. For tapers and details, see drawing.

To shape the mast, lay out taper carefully. Nail short battens on either side as guides, and saw down to them 8 inches apart. This prevents a sliver running ahead. Hew out with light sharp axe. True with plane. Do likewise with other side. If you want to round it, first make it octagonal after squaring; then round, leaving one face flat for the track.

I became concerned about the weight, so ripped the mast down the whole length, crosswise of the boat, sawing first one side and then the other so saw would run true. Every two feet I left a solid place and hollowed out between. But before ripping I drove screws varing from 2″ to 3½″, where these solid places were to come, so the mast would fit together. At bottom two wooden dowells. Tackle bolts hold it at top. The joint is not tight, but it does not show.



(Top) Planking up is started aft. Double keelsons parallel to centerboard are used. (Center) The canopy is spread by poles across the boom. (Bottom) Deck beams are placed before removing molds and diagonal rib-to-beam braces are fastened. The latter appear as black triangles in the photograph

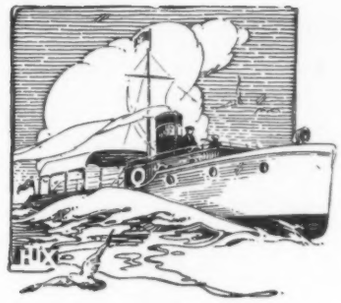
Reefing Device

In Mr. Howard's book on his yacht *Alice*, I saw a description of a device for winding the sail up on the boom when reefing, instead of tying reef points. I wanted to use it, but could not afford the cost of the blacksmithing. After all, what is needed is an arm to twist the boom, and some way to hold the arm at the bottom. The detail drawing describes this better than words. It also solved the gooseneck problem, for the latter would have cost six dollars or more, and the whole device cost about a dollar, plus the price of three eye bolts, perhaps a dollar more. In practice, the device works perfectly and justifies Mr. Howard's claims for it. You set the topping lift just taut, have the boom far enough inboard so you can wind up, untie the lower slide, or slides, to clear on mast as sail winds in, and wind in the sail as you slack the halliard. It is not necessary to stop sailing or slack anything else. One day my companion sat by while I tied the tiller and reefed alone — we had to reef, so it was not a dress rehearsal. With one of the children slacking the halliard, it was a simple matter. And it takes less time than is required to write this description. Sometimes the leach had to be straightened a little, but the sail set perfectly. The angle between the mast and the boom should be nearly a right angle. The lever has a rope loop which goes over an eye bolt; the tension holds it in place and the lever stays vertical. The reef comes out just as easily, and you can drop the sail and raise it again.

Sails

These were not hard to make. I used a hand power sewing machine of the ordinary kind. Foot power would have saved a lot of dull work. Use 6-oz. canvas, 18 inches wide, and 20 thread. Double hem. First measure the leach, and cut each end to the

(Continued on page 130)



About Those Motor Boats

By GEORGE W. SUTTON, JR.

THE motorboat pot is bubbling merrily and noisily, with this scribe making a goodly share of the noise.

If you have followed the gasoline essays in these columns for the past four or five months you may remember that we have given prominence to two very particular things — the vital and necessary changes in the conduct of the British International (Harmsworth) Race suggested by Charles F. Chapman, and the highly desirable changes in the racing rules of the International Motor Yachting Union which we have suggested.

In 1924 the American Power Boat Association was invited to join the International Motor Yachting Union, which is now composed of the motor boat racing authorities of twenty countries. At that time the American Power Boat Association had no funds for a purpose of this nature and it allowed a Detroit group known as the Yachtsmen's Association of America to become the American representative in the international body.

Now, the Yachtsmen's Association of America is not a yacht club, nor is it an association of yacht clubs. It is a small syndicate of Detroit men organized for the purpose of financing and conducting the then annual Detroit 150-Mile Sweepstakes Race, a splendid event, and conducting the Harmsworth Race in Detroit, in accordance with the rules originally laid out in 1903 in the deed of gift of the late Lord Northcliffe.

The Detroit sweepstakes, after some stirring contests, have been abandoned. The Yachtsmen's Association of America, however, has succeeded in staging some great spectacles centering around the Harmsworth affair, making up in crowds and glamour what the races themselves have lacked in competition.

Then came last summer's amazing realization of the inadequacy of the Detroit River course for hundred-mile-an-hour boats, and the questionable sportsmanship of some of the conditions of the contest. This is old stuff now, but people on both sides of the Atlantic are still talking and writing about it.

At any rate, the need for definite changes in the Harmsworth Race became apparent to practically our entire motor boating population, and to the press. Mr. Chapman, whose technical knowledge has, for 18 years, brought him the appointment of Secretary of the Racing Commission of the American Power Boat Association, and also that of representative of Lord Wakefield and the family of the late Lord Northcliffe during the visit of *Miss England II* to this country, spent much time and thought in seeking remedies for the ills so apparent in the Harmsworth races. Kaye Don approved the changes completely and wholeheartedly. Gar Wood approved them "in principle." J. Lee Barrett, of the Yachtsmen's Association of America and the Detroit Tourist Convention Bureau, was sent to Europe as the delegate of the Yachtsmen's Association of America and the American Power Boat Association in British Harmsworth conferences and at the annual meeting, on November 26th, of the International Motor Yachting Union in Brussels.

To the astonishment and chagrin of British boating leaders, including Lord Wakefield and the Harmsworth family, the Yachtsmen's Association representative is said to have stated that no sentiment existed in this country for changes in the Harmsworth rules. Upon being told by Kaye Don that there would be no 1932 challenge unless the rules were changed and a new course selected, Mr. Barrett finally submitted a complete plan for a new course on Lake St. Clair, off Detroit. This course was promptly decided upon for the 1932 Harmsworth race — if, as and when.

So much for the interpretation of American boating sentiment by the Yachtsmen's Association. What happened to the specific request for changes in the international racing rules of the International Motor Yachting Union, I do not yet know. At this writing no report of the Brussels meeting of November 26th has reached these shores except a couple of brief Associated Press dispatches, which do not mention the introduction of any such suggestions.

These suggestions, first published in YACHTING, were accepted by the Council of the A. P. B. A., and by the entire organization at its annual meeting. They were formally given to the Yachtsmen's Association delegate to present to the I. M. Y. U. They were sent abroad and much space was given to them in European boating publications. Obviously, we cannot comment until we know whether they were presented at the Brussels meeting, and what reception they were accorded.

In the meantime, it has become evident that the Y. A. A. does not truly represent American national motor boating in European councils. The main reasons for this are that the association is interested chiefly in the Harmsworth and other races in Detroit, and takes no hand whatever in other contests throughout the country. It has no interest in outboard racing of any type and has excluded outboards from its Detroit regattas. Outboard racing occupies a major part of the attention of all our racing authorities, and an even greater part abroad. It is in the outboard classes in which we desire recognition of our statute mile records from the I. M. Y. U. It is easy to see, then, that the Y. A. A. cannot speak for the A. P. B. A. nor for the National Outboard Association in such matters. A definite and permanent movement is on the way to have the A. P. B. A. admitted to the I. M. Y. U. as the American representative of motor boat racing.

Articles explaining these matters which appeared in the New York papers have raised a storm of excitement in Detroit. One writer, claiming that the A. P. B. A. is an Eastern organization only, has accused it of jealousy and of trying to take the Harmsworth Race away from Detroit and holding it in New York. This is arrant nonsense. The A. P. B. A. is our national ruling body. It

(*Continued on page 142*)

Ocean Voyages

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Numerous Round-the-World and South Sea Cruises Under Way

+ + +

SEEKING adventure in small boats on long voyages has become so popular that within the past year no less than five round-the-world voyages have been under way, and some fifteen transoceanic passages and South Sea cruises, altogether making up a list of some twenty blue water voyages, which by no means includes numerous unrecorded exploits. Those who have gone because of their love of adventure have usually been successful in finding it and in completing their passages. Others have gone because of their love of publicity and have usually been unsuccessful, which is as it should be. And for every voyage completed there are about three preparing to start. But the majority of them never get started.

Probably the most interesting and, by the same token, the least heard of voyage is that being made by a single-hander, Edward Miles, in the 37-foot schooner *Sturdy II*. Several years ago, Miles set to work in Memphis, Tennessee, and built his own boat, which he shipped overland to Savannah and then sailed to New York. The run from New York to Gibraltar was made in 45 days. All went well on the Mediterranean passage to the Red Sea. But in the Red Sea, which stubbornly resists all round-the-world voyagers, *Sturdy I* was destroyed by a gasoline fire and her skipper barely managed to reach safety on a reef. The indomitable Mr. Miles had the hardihood to return to America, build a sister ship, take her by steamer to Suez and resume his voyage where he had left off.

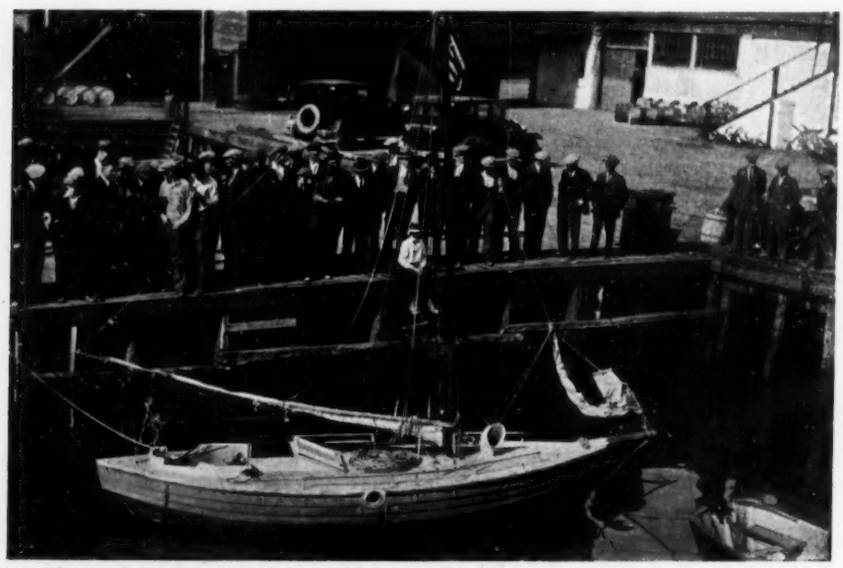
Miles has continued by way of Colombo, Singapore, Borneo, Hongkong, and Yokohama, to San Francisco, where reports last located him. It seems likely that before long he will drop anchor in New York Harbor to complete the fifth single-handed voyage around the world, and the first to sail from west to east, the more difficult way of rounding.

"Ahto," the 29-foot Esthonian sloop, followed the Trans-atlantic racers in a 29-day crossing

Newspaper accounts recently carried the story of the return to New York of the 32-foot ketch *Svaap* sailed by William Robinson. He started in the 1928 Bermuda Race, and from Bermuda continued through the Panama Canal to the South Seas and westward to the Red Sea, with its reefs, scorching winds, parched shores and thirsty, shrieking Arabs. *Svaap* left Gibraltar this past September, after fitting out for the homeward passage by way of the Northeast Trades. The long Atlantic passage from Tenerife to Beaufort, N. C., was made in 42 days to complete the 32,000-mile voyage.

Teddy, a Norwegian 40-foot double-ended cutter is more than halfway on her round-the-world voyage. She crossed the Atlantic from Norway to Panama and sailed eastward through the South Seas to Australia. Erling Tambs, her skipper, started with his wife and one hand as crew, but somewhere in the Canary Islands the first mate presented the skipper with a new addition to the ship's crew. And now triangular, white private signals will doubtless be hung each day to dry in the sea breezes that blow *Teddy* home to Norway.

Explorer, a 36-foot yawl, built by her skipper, Carl Justice, after the *Sea Bird* and *Islander* model, is starting on a world voyage in an attempt to lower the time for circumnavigation. *Explorer* expects to make the voyage in less than a year. It is doubtful if she can, and, if she does, it won't be much fun. Haste spoils such voyages.



"Chicagoan" reached St. Johns, Newfoundland, with a crew of two en route to Europe

A professor of Spanish in a western university decided to return to his native city, Barcelona, purchased a 36-foot ketch, named her *Evalu* after his seven-year-old daughter, who with her mother and father comprised the entire crew, and crossed the Atlantic in July, 1930. Professor Blanco's knowledge of navigation was decidedly meager at the start, with the result that *Evalu* wandered all over the Grand Banks for 38 days on the way from Gloucester to the Azores. The three continued to Spanish Morocco, through the Straits of Gibraltar, and finally to Barcelona, but that was not the end. So deeply bitten by the bug was this nautical family that they have decided to sail on around the world from west to east. They are on their way now somewhere — perhaps hammering hard seas in the Red Sea, hove to in a gale in the Indian Ocean, or snugged down in the peaceful harbor of a far-off, forgotten island.

The five round-the-world voyages are being made in boats under forty feet over all. There may be others as small making the same voyage that we have not heard of, and there are innumerable larger yachts making world cruises.

The outstanding voyage to be completed this year is probably that made by the Esthonian boys in the 29-foot sloop *Ahto*. Sailing from Esthonia in 1930, *Ahto* crossed the Atlantic to Miami and then returned to Europe this summer, starting from Newport with the Transatlantic racing fleet. During the return passage, a young Canadian who had signed on to replace one of the two Walter brothers was lurched overboard and barely rescued before going under. They sailed into Plymouth 29 days out of Newport, a good crossing for a boat of *Ahto's* size. She was sold in England and her crew have returned to Esthonia to build a larger boat.

Although the story of *Intrepid* appears on other pages in this issue, she has a place here. She was built in Manila by an American, Roy Barcal, a native of Michigan, who wanted to sail home in his own boat. The passage from Manila to New York was made by way of Borneo, Singapore, Colombo, Suez, Gibraltar and the Canary Islands.

South Sea cruises are becoming so popular and numerous that it is impossible to keep track of them all. Five British yachts are on their way to, or already are cruising the South Seas. Each has taken the same general track, sailing south from England to the Canary Islands and then westward through the northeast trades to the Caribbean and Panama.

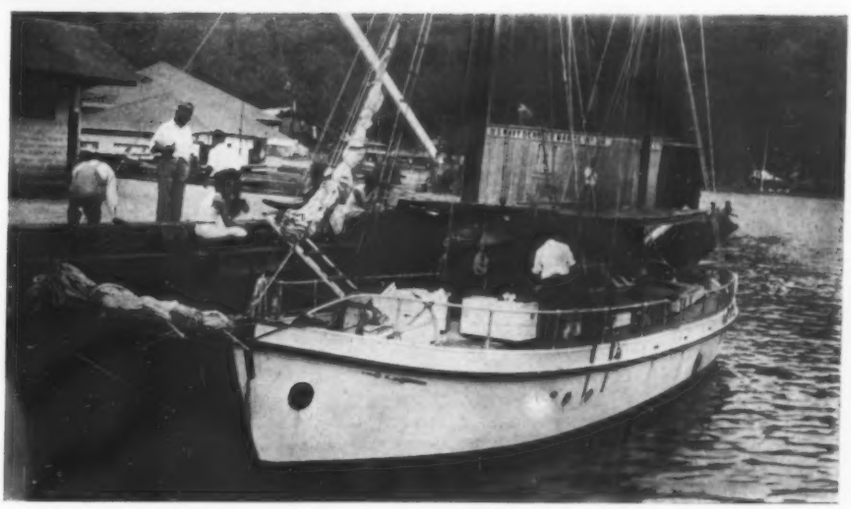
Inyala, a 23-ton, 51-foot yawl reminiscent of *Amaryllis*, set sail from Brixham in July, 1930, her crew of three resolved that life in the city was just earning enough money to buy enough beer to deaden the memory of how the money was earned. They were bound for a South Sea atoll where there was nothing to do but wait for the coconuts to drop off trees. *Inyala* took them safely across the Atlantic through the Panama Canal, and word recently came from them in Hiva Oa. So their dream is coming true.

Another group of young Englishmen, out of work and not wishing to accept the dole, renovated a Cornish fishing boat of the double-ended type, named her *Southern Pearl*, and sailed away for the Pacific Isles. They reached Cristobal, at the Panama Canal, last July, and declared they would put *Southern Pearl* on a trade run upon reaching the islands. By this time her deck may be loaded with copra and her crew now among the fortunate employed.

Uldra, a 10-ton yawl, owned by G. G. Owen, left England in September, bound for the South Seas, and *Pacific Moon*, a 14-ton cutter, is making a similar passage. Another passage of interest is that of the *Ingrid*, a 15-ton cutter which left England last March bound for Buenos Aires, arriving in that port last August. *Gullmarn*, a Swedish double-ended "Koster," 34-feet over all, recently completed a long passage from Gothenburg to Sydney, Australia. Her track was the usual one made by way of the northeast trades, Panama and the Marquesas. There were only two in her crew, George Benson, the owner, and Anders Johansson, navigator.

(Continued on page 138)

The crew of "Nomad" in Samoa. They left Los Angeles in September and are cruising the South Seas



Right. "Nomad," a 50-foot ketch, is a sort of Danish double-ender built on Puget Sound

Pick out the boat that should be disqualified. A jam at the mark in a regatta on the lower Elbe, Germany

The Month in Yachting

"Svaap" Completes Long Voyage

TWO days before Thanksgiving, when the warm morning haze of the late Indian summer was lifting above New York Harbor, two jib-headed sails driving a small white hull came into view of a group of friends assembled at the Battery to welcome home William Robinson, youthful skipper of the 32-foot ketch in which he was returning from a voyage around the world.

Three and one half years ago *Svaap* left New London in the 1928 Bermuda Race. From Bermuda, with a crew of two, *Svaap* continued south through the Panama Canal and on to the South Seas. There she made stops at most of the island groups, and at Tahiti a pearl diver, Etera by name, joined *Svaap* to take the place of her former crew.

Following the prevailing winds, the little ketch sailed westward through the New Hebrides to Bali and on to Singapore, Colombo, Aden and the Red Sea. In the Mediterranean *Svaap* followed the Italian coast to the French Riviera where she laid over before sailing to Gibraltar.

In September *Svaap* departed from Gibraltar to follow the Trades westward to America. The passage from Tenerife in the Canary Islands, to Beaufort, N. C., the longest of the entire voyage, took 42 days, and thence the run to New York was made through the inside passage.

As the snug little ketch entered the marine basin near the New York aquarium, the skipper gave several commands in French and, as Etera let go the anchor, the long voyage came to a successful end. Several lines were cast ashore and *Svaap* was drawn alongside a float where friends were waiting to deluge the skipper with congratulations.

The end of a famous yacht. "Zingara," ex-"Lloyd W. Berry," well known for her extended Atlantic cruise some years ago. She was burned, and sank in the Pacific on November 8th, some thirty miles off Santa Monica, Cal.

Svaap was built in Nova Scotia from designs by John Alden and is a sister ship of *Eaglet*, whose lines and description appeared in YACHTING several years ago. She is of rather full displacement, and on a beam of 9 feet 6 inches and a draft of 5 feet she has ample cabin space. Forward is a toilet and general fore peak locker. Amidships two transom berths with large bookshelves above make a roomy and comfortable main cabin. This is open to the galley aft, where an oil stove is swung in gimbals. One quarter-berth aft is used as a bin and the other extends into a small after cabin, an unusual but useful addition which was built over and in place of the cockpit. The small trunk cabin which replaced the cockpit allows fair headroom for the man quartered aft, and a small manhole hatch in the cabin roof admits light and air. When this addition was made the tiller coming from the outboard rudder was cut short to clear the after end of the trunk cabin, and a wheel and drum were mounted on the forward side of the trunk. A chain wound around the drum was brought aft to the tiller. The sides of the forward trunk cabin were continued over a bridge deck to join the sides of the after trunk cabin, and the space between makes a small cockpit.

The jib-headed rig is very short and easily handled. A 2-cylinder Kermath tucked away under the companionway is still going strong after the years of hard service.

Svaap was sailed from the Battery to Port Washington where she was laid up. Etera is returning to Tahiti and William Robinson is writing his book.

Acme

"Svaap" (left) on the last mile of her recently completed 32,000-mile voyage around the world

They will number them 13. Yacht "Viking," of the Royal Nova Scotia Yacht Squadron, comes to grief off Halifax

V. A. Bower

Ocean Race to Nassau is Proposed

A PLAN for a proposed race from St. Johns River, Florida, to Nassau has been announced by the Junior Chamber of Commerce of Jacksonville, which has invited the participation of yachtsmen throughout the Eastern seaboard.

If a sufficient number of entries is assured, this 400-mile ocean race, over a fine course, will start on February 15th or 16th and will be sailed under one of the established rating rules. The start is designed to bring the yachts into Nassau in plenty of time for the celebration which marks Washington's Birthday, the most festive occasion of the winter season.

Paul Emmert is chairman of the Race Committee of the Junior Chamber of Commerce of Jacksonville, and will be glad to furnish details.

N. A. Y. R. U. Re-Elects Mallory

AT THE annual meeting of the North American Yacht Racing Union, held in New York, on December 12th, Clifford D. Mallory was re-elected president. In addition, the following officers were elected to serve during 1932: First vice president, Thomas K. Wade, of Toronto; second vice president, Stuart Haldorn, of San Francisco; secretary, Donald Cowl, New York; treasurer, Fred D. Porter, Chicago. The Executive Committee is composed of Morgan Adams, of Los Angeles; G. Herrick Duggan, of Montreal; Ernest Lee Jahncke, of New Orleans, and Joseph V. Santry, of Boston.

Walter Burgess

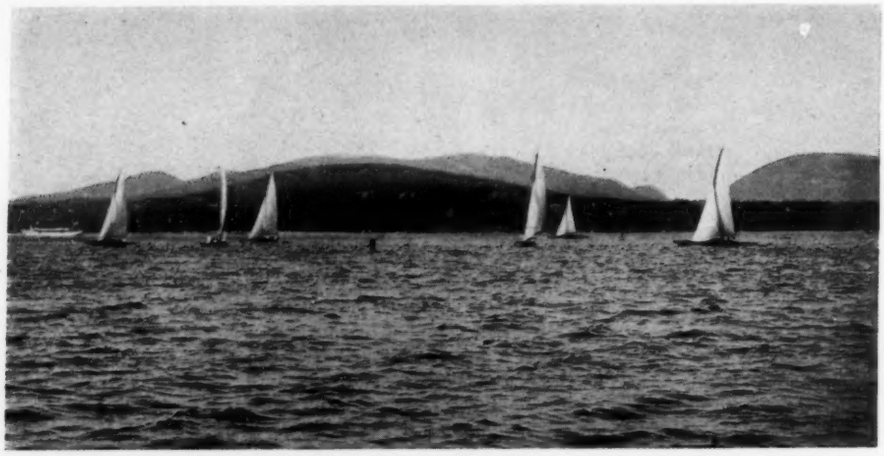
WALTER BURGESS, secretary-treasurer of the Boston Yacht Club for more than a quarter of a century, and one of the oldest yacht club officials in the country, died on December 1, 1931. He attended his last club meeting a few weeks before, and although in his eighty-first year, he signed his name without the aid of glasses.

Four of the seven sons of Benjamin F. Burgess, a Boston merchant and a native of Sandwich, Mass., were distinguished yachtsmen. Franklin, the eldest, was one of the founders of the Eastern Yacht Club and sailed in its first regatta. The fame of Edward Burgess, creator of three America's Cup defenders spread 'round the world, to be revived by his sons, William Starling and Charles Burgess, also contributors to America's Cup defense. Sidney was a lively small boat sailor and a designer of some note, with a son, Hollis, also a racing yachtsman, a naval architect and the founder of a yacht brokerage business which his uncle subsequently carried on.

Walter Burgess pushed off from his father's summer home at Beverly, while in his "teens," and was one of the three who initiated the Beverly Yacht Club which, 25 years later, transferred its activities to Buzzard's Bay, but did not give up its name. So enthusiastic was Walter Burgess in the success of the new club that he purposely remained away from his graduation exercises at Harvard in order to sail in its first regatta on June 22nd, 1872. Within a year he was one of the club officials, and in 1875, although only a young man, he served as one of the judges

Thomas Osborne

Start of the Vineyard Sound Interclubs in the eighth annual regatta of the Edgartown Yacht Club. Nineteen starters were caught by the camera



The 30-Square Metre Class racing off North East Harbor, with beautiful Mt. Desert in the background. The "Thirties" are popular at North East and have proved fast under conditions which prevail there

were added in late summer, and one Swedish-built yacht arrived too late to make the active racing season.

With the announcement of the purchase of the first eight boats, a perpetual trophy was placed in competition by Russell A. Alger, Jr., purchaser of *Heintut III*. This trophy was to be awarded to the yacht having the highest number of points after sailing nine yacht club regattas, the Inter-Lake Yachting Association's Annual Race Week series, and a special series of races at the end of the summer in which points were to count double.

The season started on Decoration Day. After that race followed race in close order, with *Heintut III* and *Medic* slowly bringing their score near to the top of the list. After sailing the eighth yacht club regatta and the three races of the Inter-Lake Race

in the famous Isles of Shoals Regatta in which a dozen large schooner yachts, including the *America*, were disqualified.

His first boat was the little Herreshoff cat *Posy* which he raced for several years on Massachusetts Bay, and the second was another Herreshoff creation, the *Tulip*. Many others followed until at the close of his racing career about twenty years ago, he had owned forty yachts. He always considered his cat boat *Myth*, designed by his brother Sidney, his most successful craft. It was a matter of considerable pride that he never entered a protest because of a foul.

Mr. Burgess had collected an unusually complete yachting library which included a set of scrapbooks and files of yachting magazines, all of which he left to his club. It is understood that these will be preserved in a fireproof cabinet, the tribute of his fellow members to his faithfulness and inspiring leadership.

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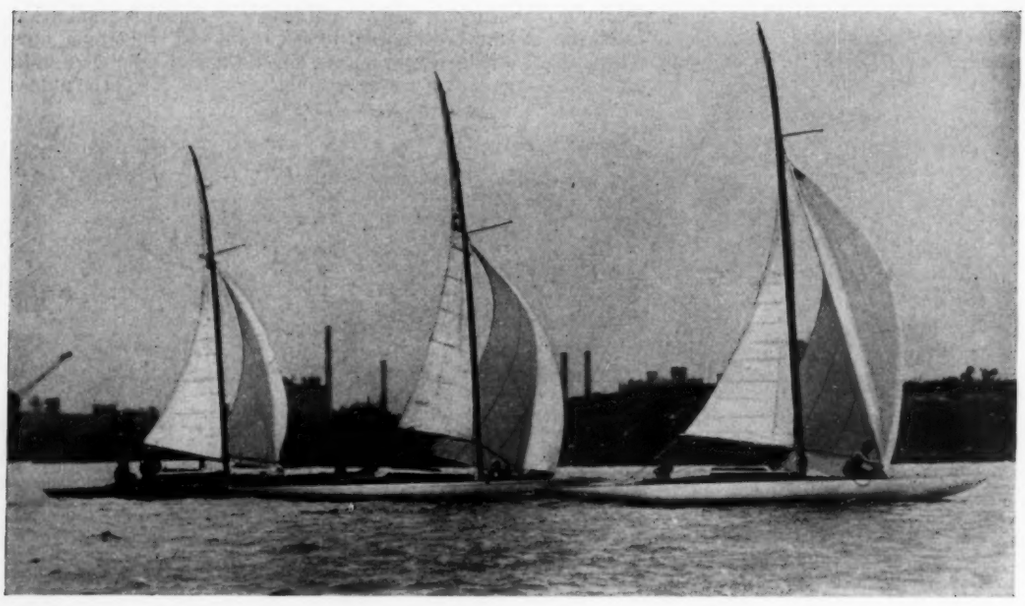
The Detroit River 22 Square Metre Class

THE starting of another racing class at Detroit recently was nothing new to the local sailors, but the advent of a class so modern in design and rig as the twenty-two square metres caused more stir than the cancellation of all war debts. Eight of these little racing yachts were purchased this spring in Europe; two American-designed and constructed yachts

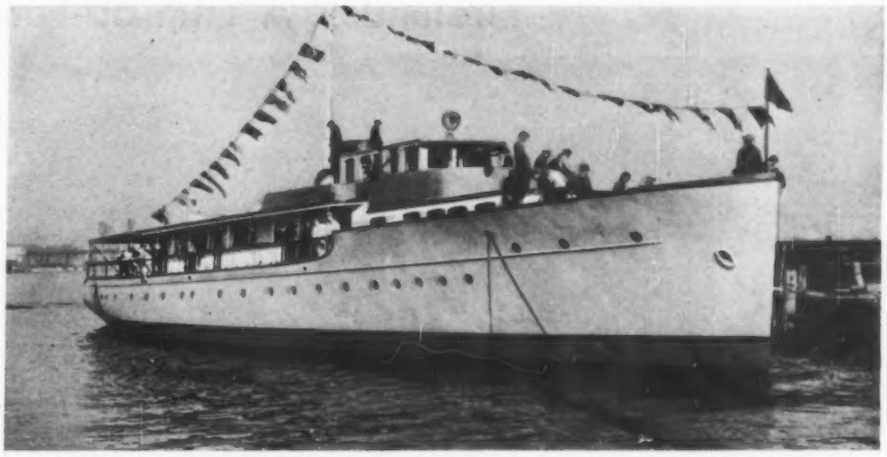
"Jacinta," a new schooner launched last summer for J. E. Gerich. She is 76 feet in length and is from designs by S. S. Crocker, Jr. She is powered with a Sterling reduction gear motor



The 22-Square Metres at Detroit. "Medic" leading "Luchs" and "Waterwitch"

Week, *Heintut* finally broke into the lead, with *Medic* and *Waterwitch* tied for second place only one point behind. In the final event scheduled by any of the local clubs, *Medic* crossed the line first with *Heintut* close astern, and these two yachts thus tied for season honors.

Thus the leading boats entered the special championship series of three races. *Medic*, heretofore regarded as a light weather yacht, upset all of the shore "dope" when she won the opening race in a hard north wind and driving rain. With *Heintut* finishing third in this first event, *Medic* was out in front to the extent of four points, a lead which she was to enjoy only over night. The next day dawned with a still larger sea running, and while the wind had increased somewhat the rain had disappeared. *Waterwitch*, considered all through the season the most dangerous heavy weather contender, easily took the second race, with *Naiad*, sailed by the veteran Wally Hock, second for the second time in this series. *Heintut III* crossed the line third with *Medic* dropping back into fifth position, bringing about another tie. The last race was taken by *Naiad*, but *Heintut III* managed to beat *Medic* at the finish by a scant 13 seconds, thereby winning the championship.



Launching of "Alamo," a new 148-foot steel Diesel yacht, from the yard of her builders, the Mathis Yacht Building Co. She is owned by William F. Ladd, and was designed by Tams, Inc. Two 375 h.p. Winton Diesels furnish the power

Throughout the season much talk centered about these apparently under-canvased yachts, and discussion was rife concerning their speed and ability as compared with other local classes. With this fact in mind, the Grosse Pointe Club arranged a team race between the "Twenty-twos" and the one-design Class C boats, popular in Detroit as well as in many Canadian ports. The series of two races was sailed with eight yachts starting for each team. In the first race, sailed in moderate air, the square metres won high points with all of their boats finishing well up. In the second race, in a bit harder air, the square metres finished their eight boats all in advance of the C boats, proving without a doubt the superiority of this new class. This team race had much to do with strengthening the square metre association at Detroit, with the result that many more of these little racers will be seen in the waters of Lake Saint Claire next season.

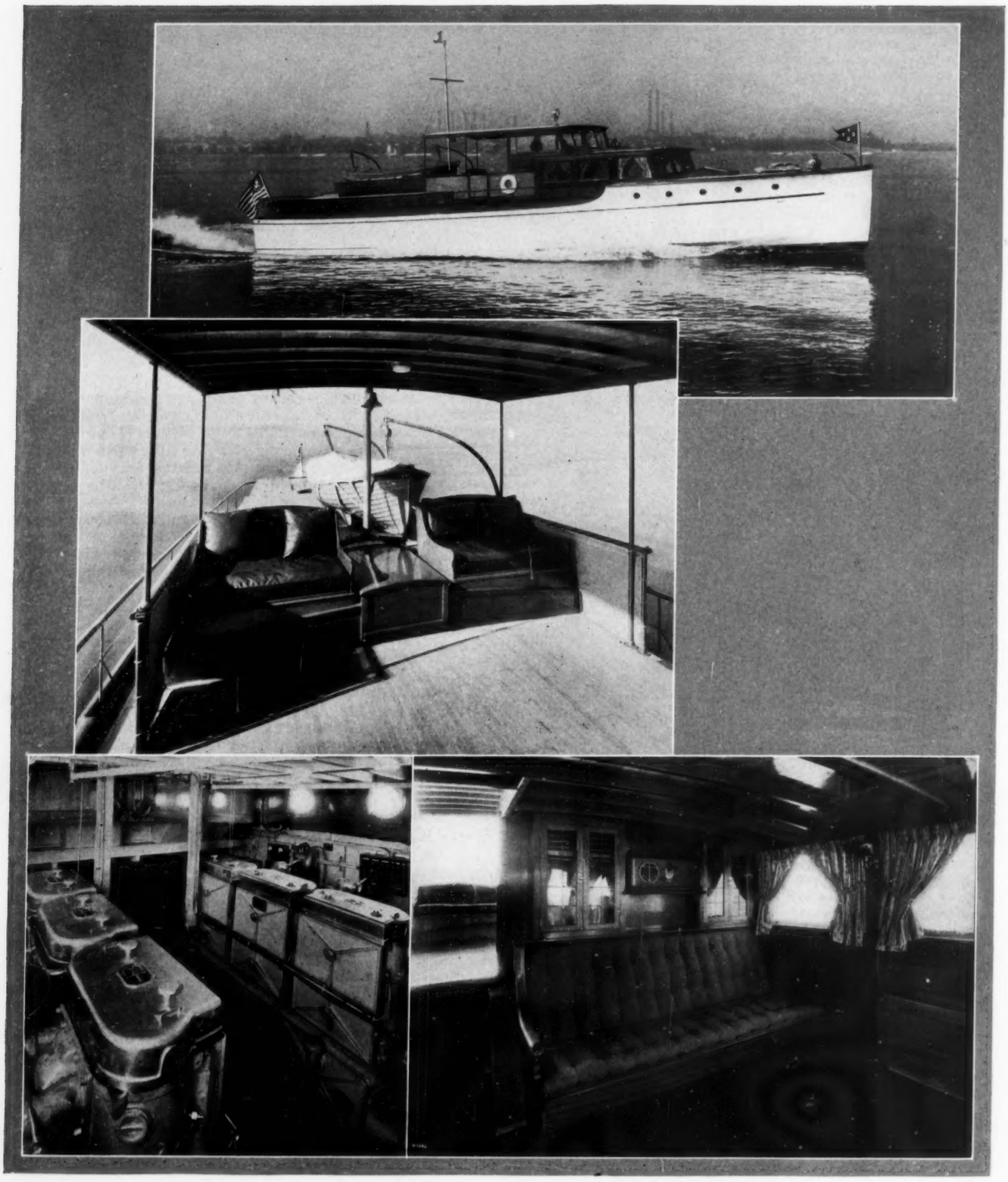
Detroit has already accepted a challenge for a series of races next year with representatives of Sweden, Denmark and Germany, an event which will add color to the 1932 season.

Bermuda News Photo

One of the new 12-foot dinghy class at Bermuda. Eighteen of these little boats are being sailed and raced on Hamilton Harbor

Salton Sea, California, 248' below sea level, where the outboard mile trials were run October 16th. It is here that Tommy Estlick made his mile record of 56.525 m.p.h.

"Firelands," A Trim 65-Footer



"Firelands" was designed by F. K. Lord and built by George Lawley and Son Corp. for W. H. Millspaugh, of Sandusky, Ohio. Two Murray and Tregurtha fuel oil engines, developing 130 h.p. each, give her a speed of 18 m.p.h. The spacious bridge deck has been cleverly laid out with two large lounging seats on either side of the after companionway. Her engines are not Diesel motors but operate at low compression and burn fuel oil. They are placed under the bridge deck in a clean, well-lighted engine room which provides full headroom. Ample room in the raised deckhouse forward makes a comfortable dining saloon and main cabin which is accessible to the galley forward.

Under the Lee of the Longboat

by Cap Stan

NOTWITHSTANDING the undeniable fact that times are not as good as they were a year or two ago, we are going to have the annual New York Motor Boat Show in Grand Central Palace once again. Perhaps there won't be quite as many exhibitors as in previous years, and doubtless some of the exhibitors won't have quite as many models on display as heretofore, but all signs point to its being a good show nevertheless. There will be new models of both cruisers and runabouts, showing distinct advances in many features. There will be several new motors, and up-to-date changes in some of the old models of several manufacturers. New and interesting "gadgets" will be seen on every hand. For the motor boat industry is plowing along at a good pace despite the depression, and you'll be behind the times unless you go to the show and get a glimpse at what is going on. Remember the date — January 22nd to 30th, inclusive.

+ + +

I was glad to be on hand at the Battery when Robinson completed his round-the-world cruise in *Svaap*. The boat appeared to be in fine shape, both on deck and below, and the captain and his dark-skinned South Sea Islander companion, Etera, both seemed to be in fine spirits and good health, although Bill appeared to be trained a bit fine. While Robbie's story ran serially in one of our contemporaries, many of us missed part or all of it. Wherefore his book, soon to be published, will be relished by any and all who are interested at all in yarns of the sort, for *Svaap* had plenty of interesting adventures, and Robinson developed into a mighty good writer during his pilgrimage. Incidentally, *Svaap* is a duplicate hull of *Eaglet*, whose plans, by Alden, appeared in YACHTING for April, 1925, although her rig is a bit shorter, and she grew an after cabin house in some foreign port.

+ + +

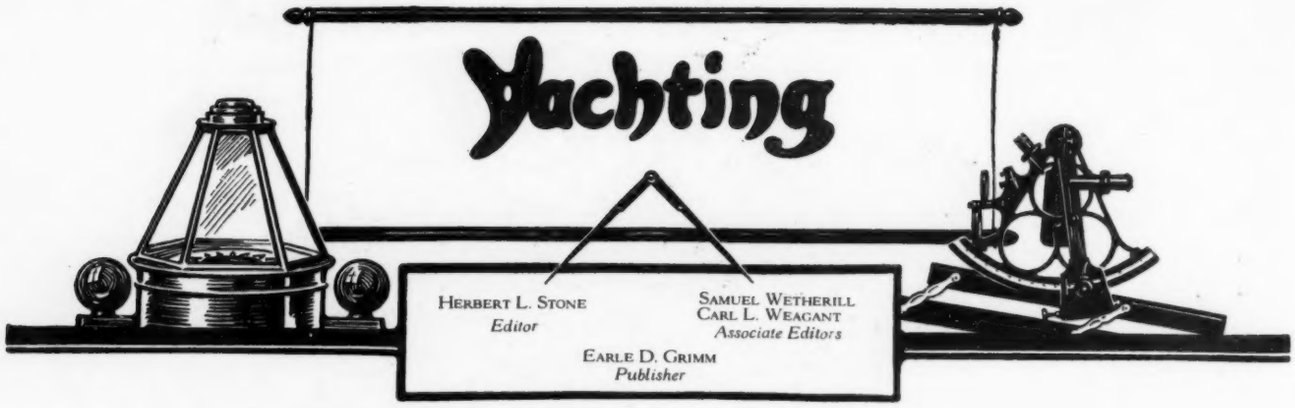
Had a squawk the other day from a gentleman who was a bit miffed at my paragraph naming the six-metre team which would journey abroad in quest of the British-American Cup. This man, who is in a position to know what it's all about, says that the four boats mentioned are going, all right, but that the Seawanhaka Corinthian Yacht Club, which is handling the affair, has invited any and all six-metre boats to accompany them and indulge in trial races on the other side for the final selection of a team. That's the set-up, and I apologize for not telling the whole tale, the reason being that I got my information from a source which I believed to be reliable, and used it because there was no other information at hand. Seawanhaka, among others, never takes the trouble to acquaint the nautical magazines with what is going on in their bailiwick. Which is quite all right, when it concerns Seawanhaka alone. But when it concerns an international event, a definite, authentic announcement would assure the event being accurately heralded to the interested yachting public, instead of the latter being either left in blissful ignorance, or fed inaccurate dope.

+ + +

Which reminds me that with one or two notable exceptions, the yacht clubs of the country as a whole make no effort whatever to get any club news before the yachting public, be it in the nature of race schedules, club elections, entertainments, or what have you. Now, most clubs have a charter reading something like this: "The particular business and object of said club shall be to advance, foster and support the sport of yachting," etc. Without magazine and newspaper publicity the sport would never have enjoyed the splendid growth which it has undergone for many years. Yet the yacht clubs, which are chartered to "advance, foster and support" yachting, make little or no effort to advance the sport through publicity — they simply aren't on the job. They rarely have a publicity committee, and the club secretary has too many other duties to perform. If every club, association and union would appoint a publicity committee which would occasionally send out some dope to the magazines and newspapers, they would be furthering the avowed purpose of their club, association or union — the advancement of the sport of yachting. Think that over, Mr. Commodore and Mr. President.

+ + +

A cabled A. P. newspaper dispatch from Amsterdam reads: "An automobile driver's license found in the wreckage of an unidentified yacht, apparently American-owned, which was washed ashore here yesterday bears the name of Frank Palow, of New York. It is thought there were three persons lost when the yacht foundered in a storm Wednesday. A piece of the wreckage bears the words "Wilbur A. Morse, builder, Friendship." Was it a Friendship sloop? Who was Frank Palow? And will this tragedy help swell the long list of unsolved mysteries of the sea?



EDITORIAL

We Reach Years of Discretion

TWENTY-FIVE years ago this month the first issue of YACHTING made its appearance. After a quarter of a century of uninterrupted publication, we may, perhaps, glance briefly back over the intervening years, with profit to ourselves and interest to our readers.

At the time that first number came off the press interest in yachting was far less than it is today, and it required vision, and more courage, to believe that the sport would ever be able to support a magazine devoted entirely to those who used boats for pleasure. Several attempts had been made by others, all resulting in failure except in the case of *The Rudder*, which the strong personality and vigorous language of its editor, Thomas Fleming Day, had carried through many vicissitudes. But the effort was attractive to those who loved the sea and yachts, and promised much of interest even if little of financial profit.

The sport, up to then, was confined largely to sailing. Power boats were in their infancy, and were looked upon with distrust by the "sailor of the sail." The internal combustion engine was not the reliable power plant it has since become, and naval architects and boat builders were still groping for the best types of hull form for the new motors. There were but few builders of stock boats, and the industry that has since grown up to supply the needs of those who want to get afloat hardly deserved that name. Pleasure boating was confined to comparatively few localities — Long Island Sound, Marblehead, Narragansett Bay and some portions of the Great Lakes — and racing was not organized to the extent that it is now.

But the backers of YACHTING felt that there was need for a magazine devoted solely to the interest of those sailors who followed the sea for pleasure — a magazine edited for the reader as distinct from a "trade" journal, one that would reflect the spirit of the sea and preserve its traditions, that advocated participation in the sport for the pleasure to be derived from it rather than as a means of gain or the desire to win. These were brave ideals, but if they could be carried out they would, it was felt, appeal to those who, deep in their beings, had the love of the sea and the desire to get afloat. Our heritage being what it is, most of us still feel the urge of the sea and ships. If in any way YACHTING has helped to make possible that urge to get afloat, twenty-five years of publication have their justification.

Since that first issue made its appearance we have had our ups and our downs — sometimes on the crest, and sometimes in the trough. But we have striven never to lose sight of our aim, of our ideals, and any measure of success we may have achieved has been due to the loyalty, the good will, and the help of those to whom we would appeal — the man who follows the sea in his own boat, be she 12 feet in length, or the latest palatial yacht to slide down the builder's ways.

A Year for Speed Records

THE year just past has seen speed upon the water advanced at a faster rate than we have ever witnessed before, and the attainment of several marks that were thought to be beyond the realm of possibility only a few years ago. These new records have not been confined to any one class of boats, but cover practically every type, even including Diesel high speed cruisers.

In the unlimited class we have seen *Miss England II* raise the limit from 98.76 m.p.h. to 110.223, the fastest speed that has ever been attained upon the water, and in competition, over a 30-nautical-mile course of six laps, to 89.913 m.p.h. Prior to this 110-mile speed *Miss America IX* established an American record of 103.069 m.p.h. Both of these records were undoubtedly helped by the change in the conditions requiring only two runs over the mile course, instead of the six heretofore insisted upon.

Getting down to the limited power classes, we find a new record of 53.59 m.p.h. hung up in the 90-mile race of the classic Gold Cup, by the *Hotsy Totsy*, an old boat in which changes of hull gave an improved speed sufficient to establish a phenomenal record for this long course.

In the outboard field we have seen power plants developed to a point where the former goal of 50 m.p.h. was left far behind, and a mark of 56.525 statute miles per hour made in America. Truly, we are near the mile-a-minute speed with these portable power-developers. Just to show that this record was not out of line with the development of other models in the outboard field, no less than six outboard records of over 51 m.p.h. were established, and one just made in England looks as if 57 m.p.h. had been topped.

All in all, it has been a great year for those who are interested in speed development afloat.

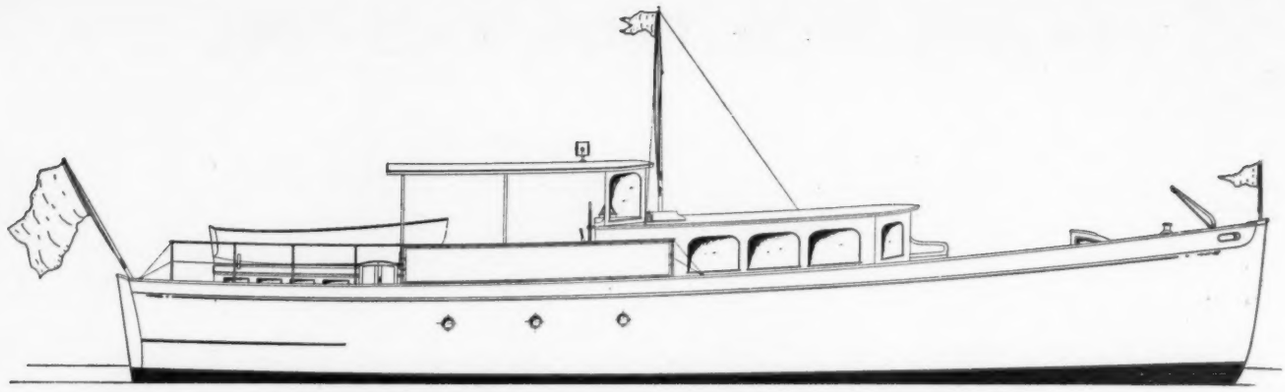
IN THE WORLD OF YACHTING

ELDON H. TRIMINGHAM

WHEN it comes to getting all there is out of a racing boat it would be hard to find anyone better than Eldon H. Trimingham, of Bermuda. Although most of his sailing is done in his home waters, he has raced enough on Long Island Sound and at Marblehead to be well known to American skippers. Nor is his experience confined to small boats, for he has sailed and raced on many of the larger yachts in this country.

As a dinghy sailor, Trimingham, in his younger days, was very successful in these little craft that are all sail and no hull, and where, perhaps, the most important members of the crew are the bailers. Even while sailing these sporty craft, he was winning races in the Gardner-designed Class S boat "Cyric," which he owned with his brother, Kenneth Trimingham. In 1926 he helped to establish the Bermuda One-Design Class, and in his "Atlantis" he has been on every team that has sailed in the international series held annually with the Long Island Sound Interclubs, and has usually been high score man in these matches. At least, his has been the hardest boat to beat. When the Six-Metre Class was taken up by the Bermuda sailors in 1930, Eldon was at the helm of his "Viking" in the first series against the American boats. In this first international series the Bermuda team lost by a narrow margin. But they "came back" that summer on the Sound and turned the tables on the American pair they met, and in 1931 they won again at Bermuda, Eldon Trimingham sailing "Achilles" to lead in the scoring.

Mr. Trimingham has been largely instrumental in making the Bermuda Race a success, being the representative of the Royal Bermuda Yacht Club on the Ocean Race Committee, and he has sailed in the event several times since 1923. He has served as Commodore of the Royal Bermuda organization, and he is also a member of the Cruising Club of America.

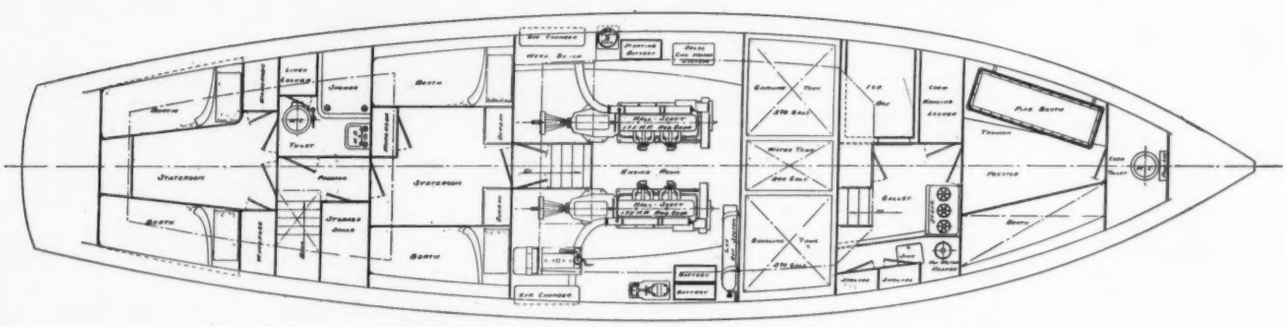


Outboard profile of the 58-foot seagoing power cruiser designed by Sparkman & Stephens

A Distinctively Different Power Cruiser by Sparkman & Stephens

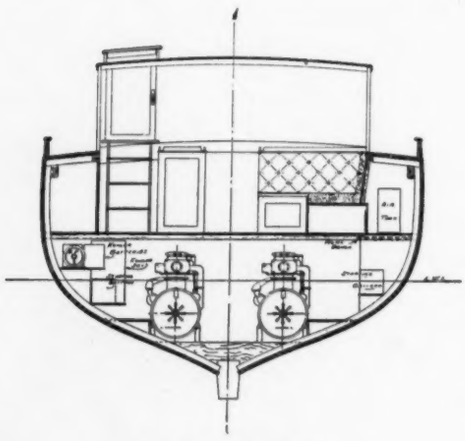
DIFFERING widely from the average run of modern power boats, the attractive craft whose plans are shown on this page will make a strong appeal to those who appreciate a boat which can "go out and take it" when occasion demands. A fine, seagoing bow, lively sheer, and good freeboard are the first things which strike the eye. Then we see the usual flat sections replaced by good deadrise throughout, and a narrow, deep stern with a real grip on the water. Last, but not least, is an iron keel, for stability and steadiness. These features, plus easy bilges and proper distribution of weights, assure a boat which should make good weather of it when it gets rough and many a boat is hunting a harbor to alleviate the discomfort of owner and guests.

These plans, drawn by Sparkman & Stephens, show a boat of the following dimensions: l.o.a. 57′ 6″; l.w.l. 55′; beam, 14′ 2″; draft, 5′. Twin Hall-Scott reduction gear motors, each of 175 h.p., give her ample power for good speed. They, and the auxiliary equipment, are installed in a midship motor compartment. Below decks, two double cabins, with toilet room between, are located aft.

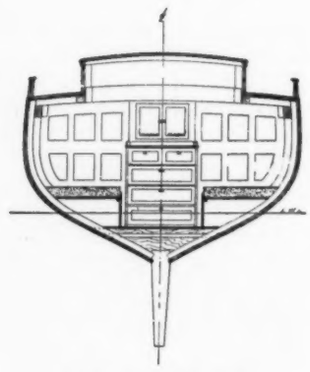


The interior accommodation plan shows excellent quarters for four in the owner's party

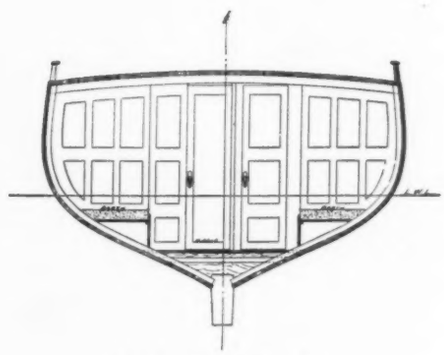
Forward is a forecastle with two berths and toilet, followed by a galley, from which a few steps lead to the sunken deckhouse, which may be used as a dining saloon, lounge, etc. A Kohler generating set supplies electricity, and there are tanks for 600 gallons of fuel and 200 gallons of water. Plenty of fair weather lounging space is found both on the bridge deck and the forward deck.



Section 5, looking aft

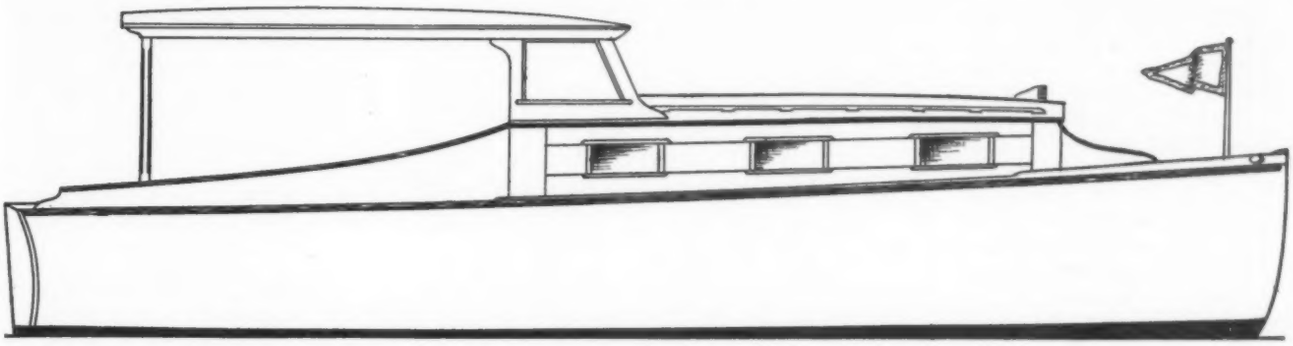


Section 9, looking aft



Section 7, looking aft

The Owens "28," a Real Cruiser at a Moderate Price

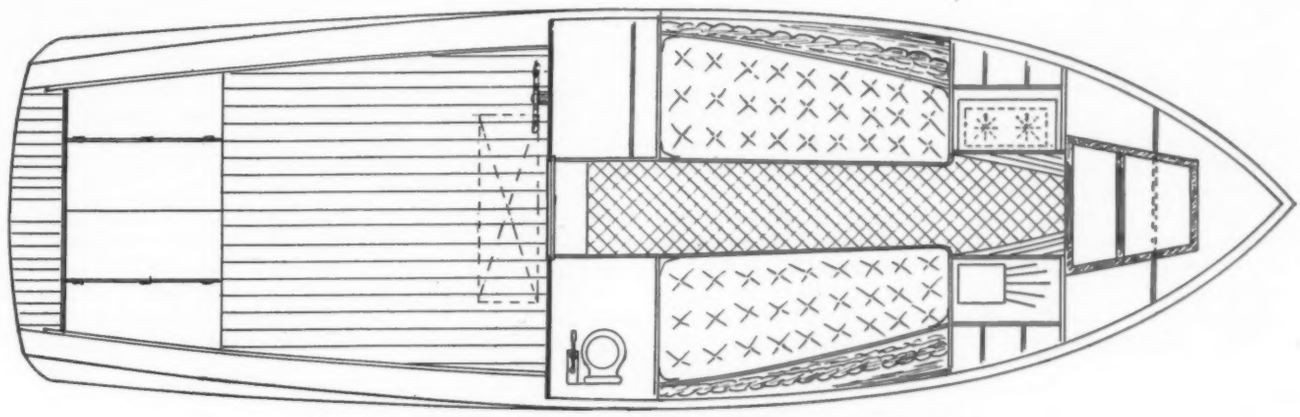


Outboard profile of the Owens "28," a moderate-priced V-bottom cruiser with an 18-mile speed

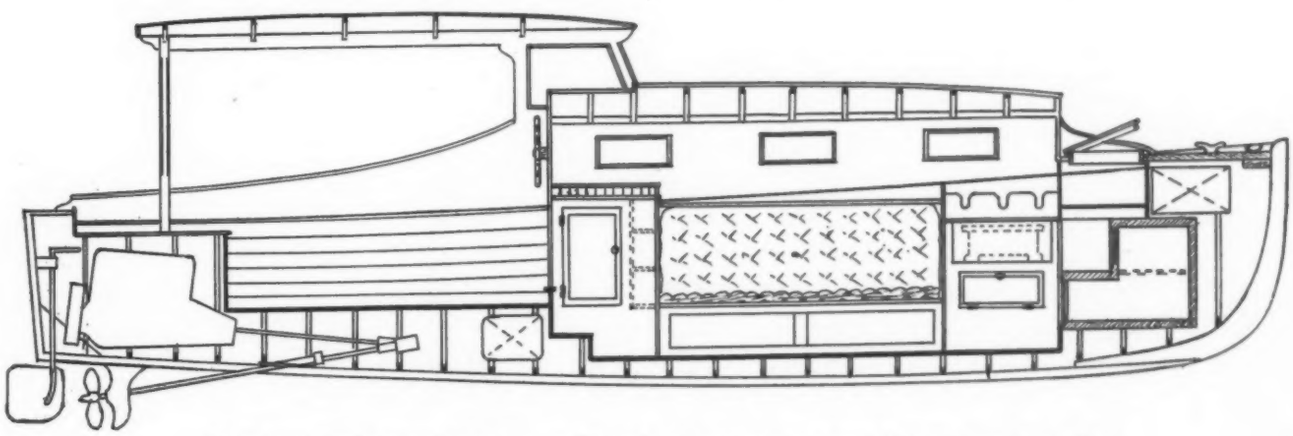
PICTURED on this page is the new Owens "28," a 28-foot stock cruiser now being turned out by the Owens Boat Co., of Annapolis, Maryland. She is of modern V-bottom design, with beam of 8 feet 8 inches and draft of 2 feet 4 inches, and has proved to be distinctly seaworthy, roomy, dry and comfortable, with an unusual turn of speed. The power plant is a Gray 6–70, installed aft with V-drive and reduction gear, which gives her a real 18-mile speed.

Not only has the price of this craft been kept low, but the materials and construction are first class, with oak keel and frames, mahogany planking, bronze fastenings, etc. The trim and general exterior appearance are such as to make one enjoy a real pride of possession.

The spacious cockpit aft is supplemented with a small forward cockpit. The large trunk cabin houses nice living quarters for four people, with complete galley forward, two upper and two lower berths, nicely upholstered, toilet room, large clothes lockers and ample stowage space. A permanent canopy covers the cockpit, and the helmsman is protected by a plate glass windshield. The hull is capable of a 25-mile speed with larger power plant, and direct drive will be furnished if an owner insists upon it, though the builders advise against it.



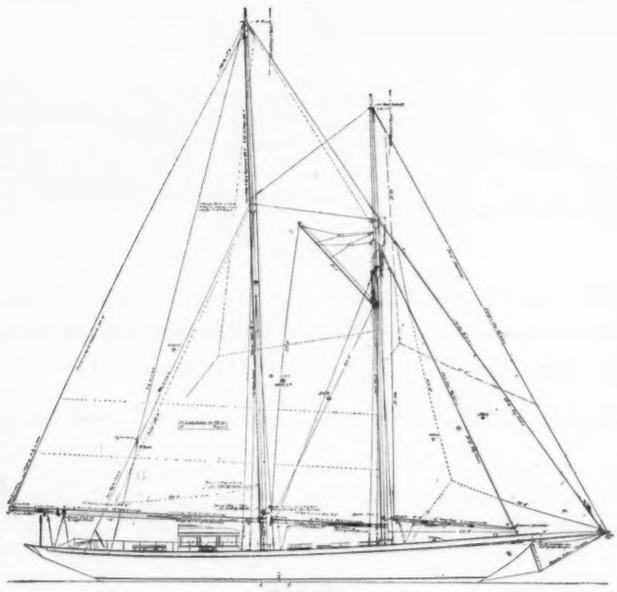
The accommodation plan shows the big 4-berth cabin and spacious cockpit



The inboard profile, showing the Gray 4-70 motor with reduction gear and V-drive, located well aft

Mower Turns Out a Fine Diesel-Powered Auxiliary Schooner

THE plans on this and the following page show a splendid Diesel-powered schooner designed by Charles D. Mower for Roger Young, which is now under construction at the yard of M. M. Davis & Sons, Solomon's Island, Md. This craft will replace Mr. Young's well-known schooner *Caroline*, a familiar figure in a number of long distance races, and has been designed for extensive offshore cruising, such as jaunts to South American waters, and possibly a South Sea Islands cruise. Her dimensions are: l.o.a. 92′ 2″; l.w.l. 68′; beam, 20′; draft, 12′; sail area, working sails, 3825 sq. ft.



Sail plan

Both in design and construction she is well fitted to "go places" regardless of weather conditions. The lines are easy, the overhangs are moderate and the freeboard ample, and the large lateral plane assures good windward qualities. The construction, which is in general to Lloyd's tables, is heavy enough to stand the hardest kind of service.

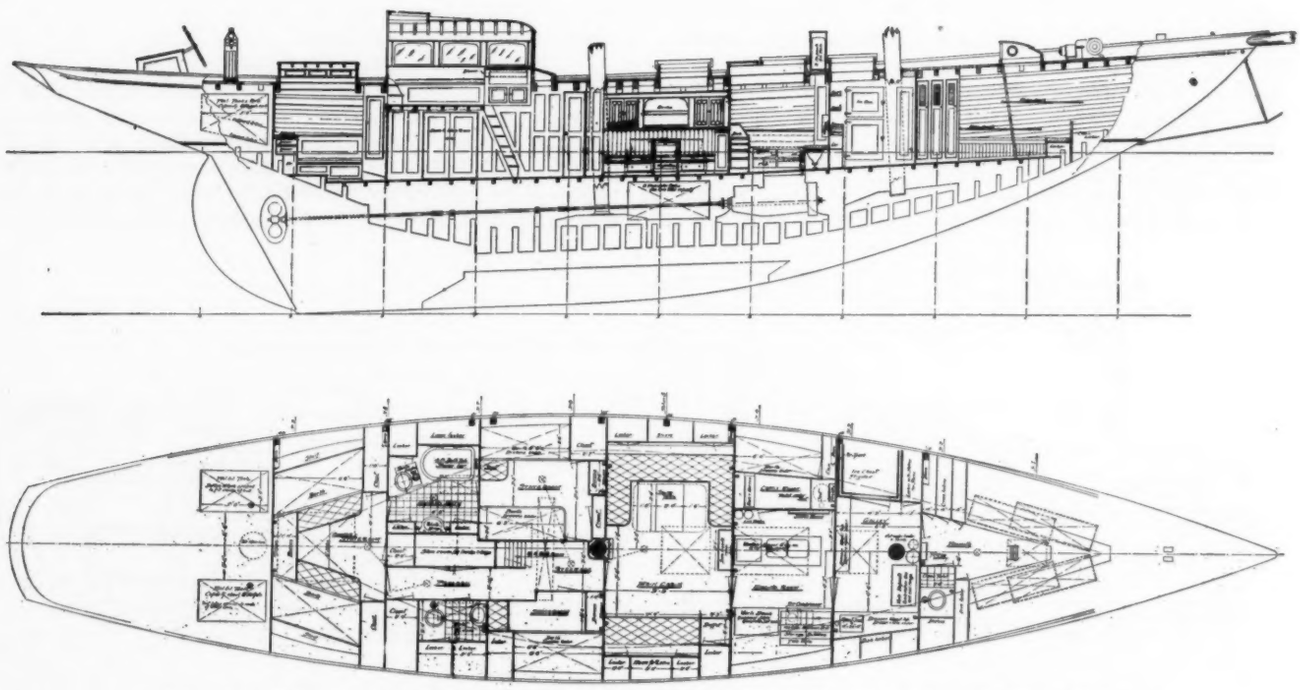
The rig is moderate in size and has jib-headed mainsail and gaff foresail, which the designer considers the best rig for offshore work. The spars will be hollow, of ample size and strength, and well stayed with rugged rigging.

The accommodations below deck include two large double staterooms, one single stateroom and a large main cabin. The owner's bathroom is located between the two double staterooms, with direct access from either one. A smaller toilet room is on the starboard side, opening into the passageway. There is ample closet and locker room in all the compartments, and an especially desirable feature is the large storage space under the deckhouse for bags and trunks.

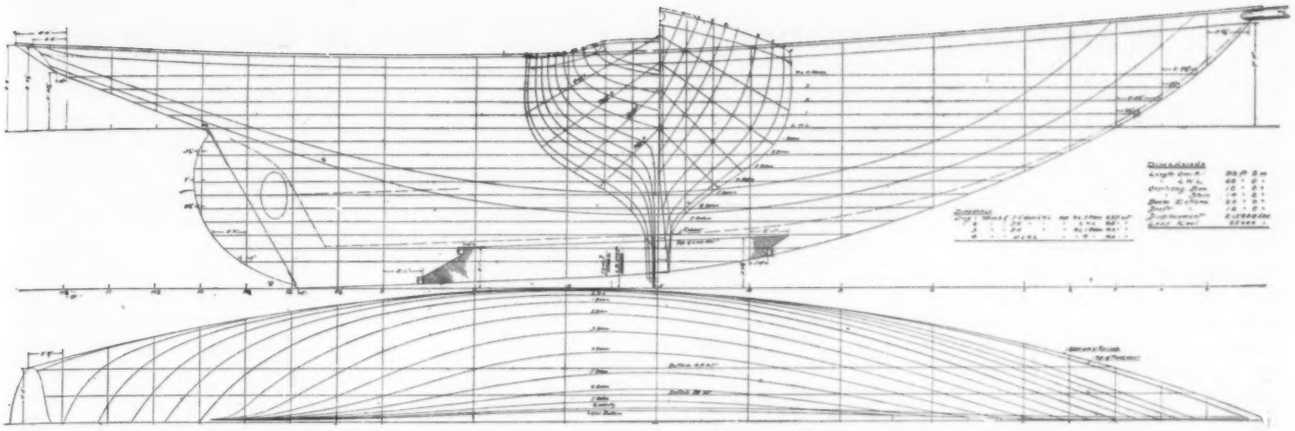
Forward of the main cabin is the engine room, with the captain's stateroom on the port side. The main engine is a 6-cylinder 100 h.p. Winton Diesel, which will turn a Hyde feathering wheel through a 2 to 1 reduction gear, giving a speed of 10 miles an hour under average conditions, and providing power enough to handle the boat under the most adverse conditions. The engine room is large enough to house the Universal generating set, batteries, auxiliary machinery and work bench comfortably.

The galley is unusually large and well equipped, and extends the full width of the ship. The forecastle will accommodate a crew of four men.

A nice feature is the sunken deckhouse, which serves as the main companionway and makes a fine shelter cabin in bad weather. It is equipped with two wide sofa



Inboard profile and accommodation plan of the 92-foot schooner designed by C. D. Mower for Roger Young



Lines and body plan of the Mower-designed 92-foot schooner now building at Solomon's Island by M. M. Davis & Sons

seats, with buffet and chart table at the forward end.

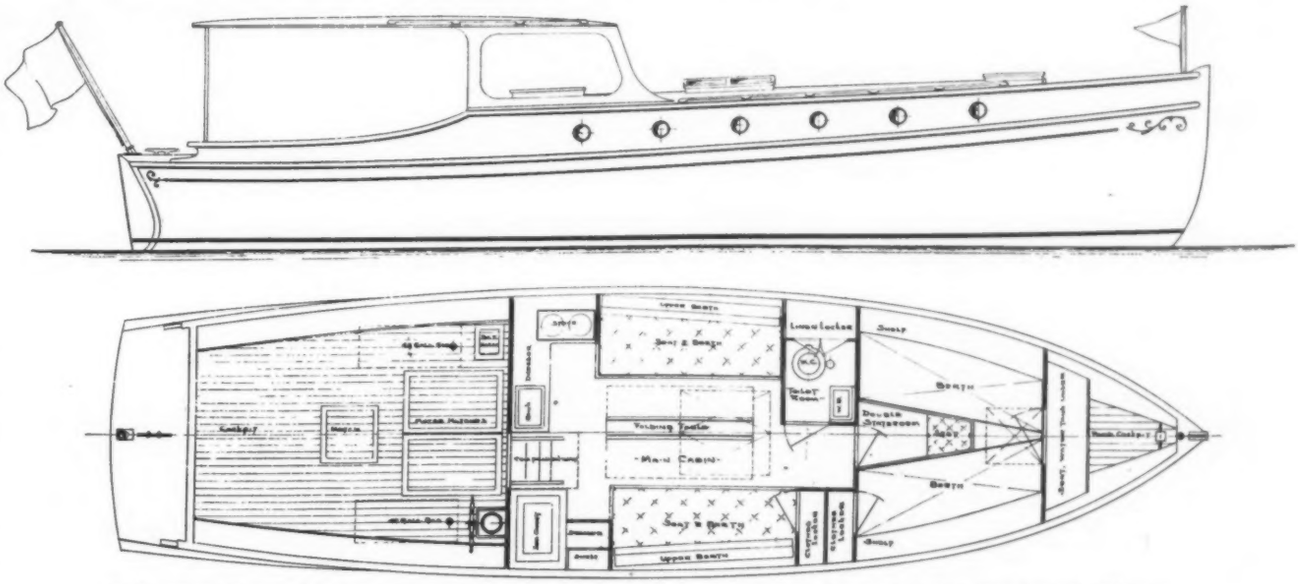
The deck and deck joiner work will be of teak. She will carry two boats, a 17-foot sedan-type owner's launch, and a 16-foot crew's launch. Early spring will see her ready for delivery to her owner.

Room and Comfort in This 38-Foot Raised Deck Cruiser

ALTHOUGH raised deck cruisers have been superseded in recent years by bridge deckers in all but the smallest size boats, the type has much to recommend it, and still finds favor in the eyes of many experienced yachtsmen who recognize its many good points. To show how good a modern raised deck boat can be, Winthrop L. Warner, naval architect of Middletown, Connecticut, has turned out the plans of the snappy craft whose plans are shown below. She is 38′ 6″ over all, 36′ 9″ water line, has a beam of 10′ 5″ and draws 3 feet of water. She has good freeboard and a nice sheer, with narrow water lines aft, the profile having been so treated as to be decidedly shippy and pleasing to the eye.

The motor, a Buda HN 298, is located under the cockpit floor, and is easily accessible by means of two flush hatches. The after cockpit is self-bailing, unusually roomy, and is protected at the forward end by a shelter with opening sash for access to the deck, the shelter extending aft over the entire cockpit. The forward cockpit has a good, wide seat, under which is located the water tank, giving gravity flow to the outlet.

The galley is located aft, with ice chest, dresser, shelves and lockers to starboard, and stove, sink, dresser and locker space opposite. The main cabin sleeps four comfortably, on two extra wide lower berths and two good uppers. A fine double stateroom is found forward, while between main cabin and stateroom are a toilet room to port and clothes lockers to starboard, one locker opening into the stateroom and the other into the main cabin. The stateroom has two built-in berths, and a hatch above, which is useful for ventilation, or may be used for access to the deck. The main cabin is equipped with a good drop leaf table, while a large skylight and plenty of port holes assure excellent light and ventilation at all times.



Outboard profile and interior accommodation plan of the 38-foot raised deck cruiser designed by Winthrop L. Warner

Watch This Schooner in the 1932 Race to Bermuda

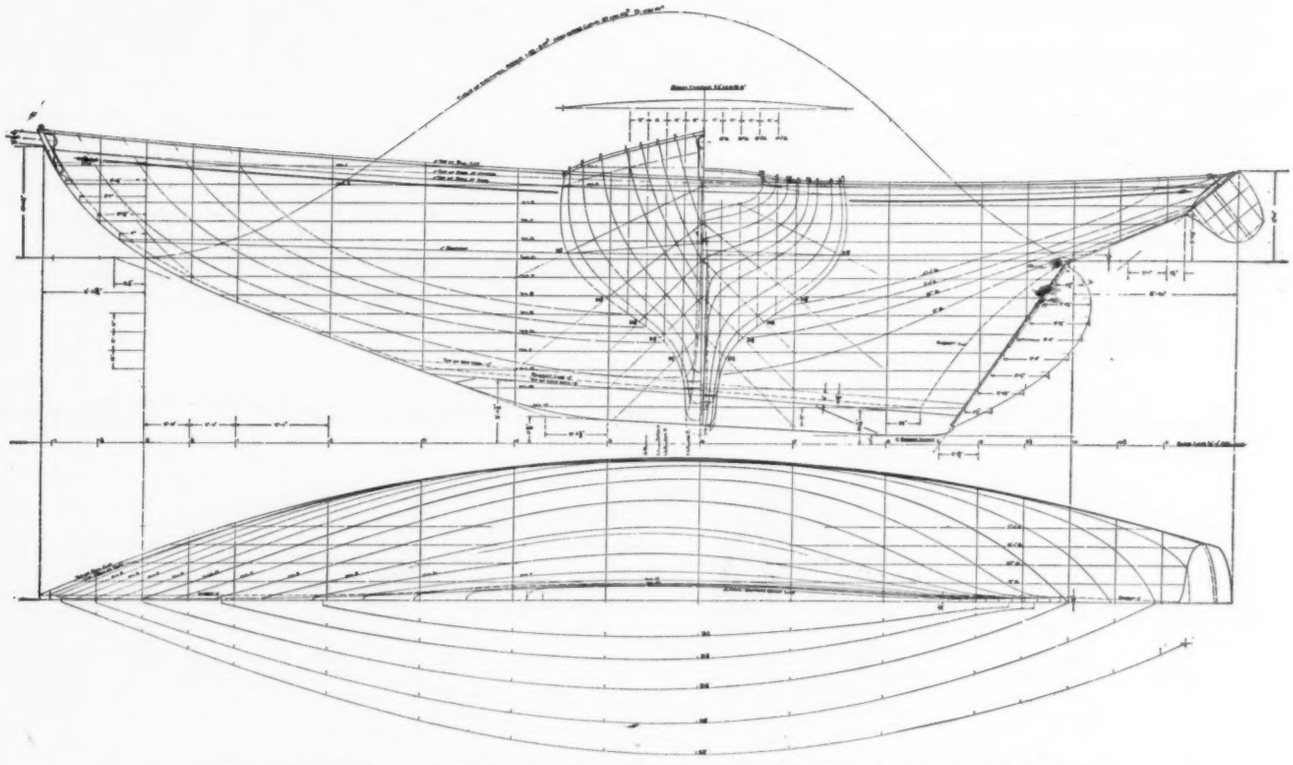
HERE are the plans of a handsome, able auxiliary schooner, now building at Pendleton's Yard, Wiscasset, Maine, which, while designed primarily for coastwise cruising, will very probably take part in the 1932 Bermuda Race and other long distance events. She will be owned by a prominent Eastern yachtsman, and was designed by Henry Gruber, of Cox & Stevens, her principal dimensions being: l.o.a. 64′ 6″; l.w.l. 50′; beam, 15′ 6″; draft, 9′ 6″; sail area, 2400 sq. ft.

Sail plan

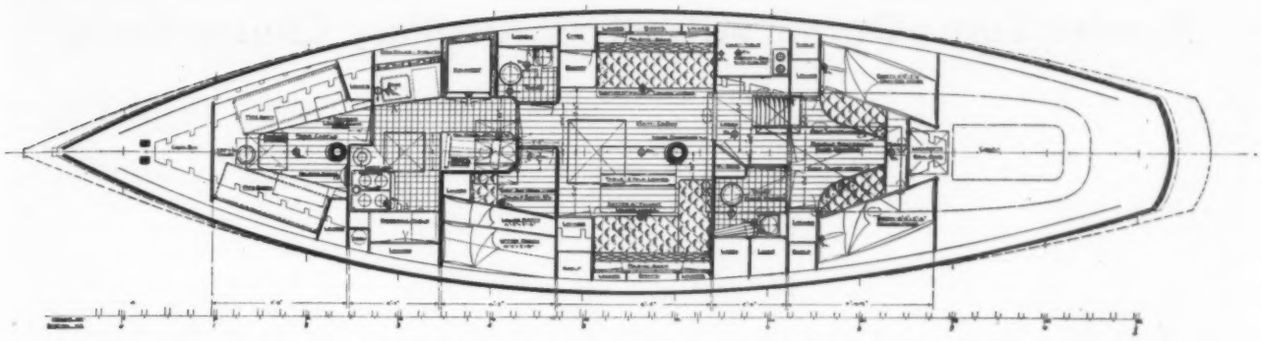
The principal dimensions of this boat were determined by the desired quarters below decks, while special attention was paid to producing a comfortable, able sea boat that could stand hard driving in rough water as well as being a good sailer in moderate going. Yet the lines do not suggest any attempt at creating a "rule beater," though she rates, under the present Bermuda Rule, 52.7 feet, without any allowance for rig or propeller. In water line length and beam she is close to *Nina*, *Highland Light* and *Mistress*, but has somewhat longer ends, and can hardly be criticised for having a "chopped-off" stern or other undesirable peculiarity sometimes ascribed to the effect of a rating rule. In sheer, freeboard, beam and displacement she appears to be a thoroughly wholesome boat, and her lines indicate that she should be able to take care of herself in competition with our growing ocean racing fleet.

Accommodations below decks consist of two double staterooms, large main cabin, two toilet rooms, chart room, large galley, and forecastle for two or three paid hands, with toilet, wash basin and hanging lockers. The power plant consists of a 40 h.p. Hill Diesel, with reduction gear, installed forward in an enclosed engine space with gas-tight trunk to the overhead skylight. An 800 watt generator will operate off the main engine for charging storage batteries, eliminating the necessity of carrying any gasoline aboard. The water tanks have a capacity of 350 gallons, while fuel tanks of 130 gallon capacity give a cruising radius of 500 miles.

Construction is of the best, with oak frames, yellow pine planking, Everdur screw fastenings, etc. The deck and exterior trim is of teak, and spars are hollow, of airplane spruce.

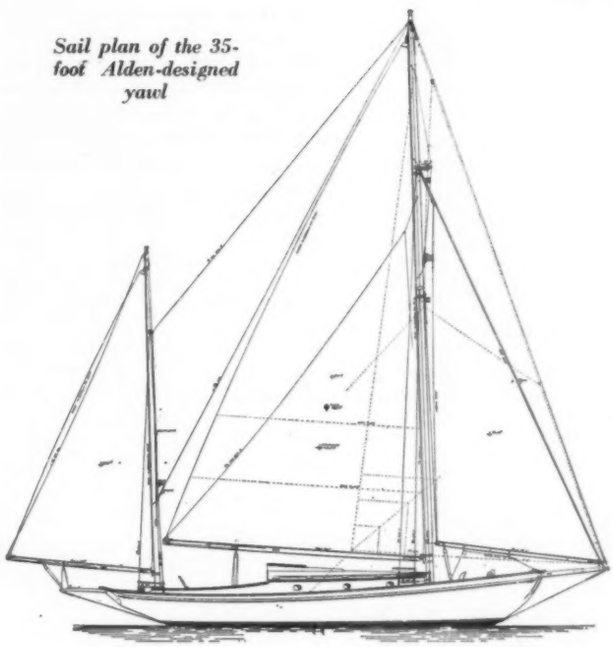


Lines and body plan of the 50-foot water line schooner designed by Henry Gruber, of Cox & Stevens



Interior accommodation plan of the 65-foot schooner designed by Henry Gruber, of Cox & Stevens, described on preceding page

Many Improvements in This Standardized Design from Alden's Board



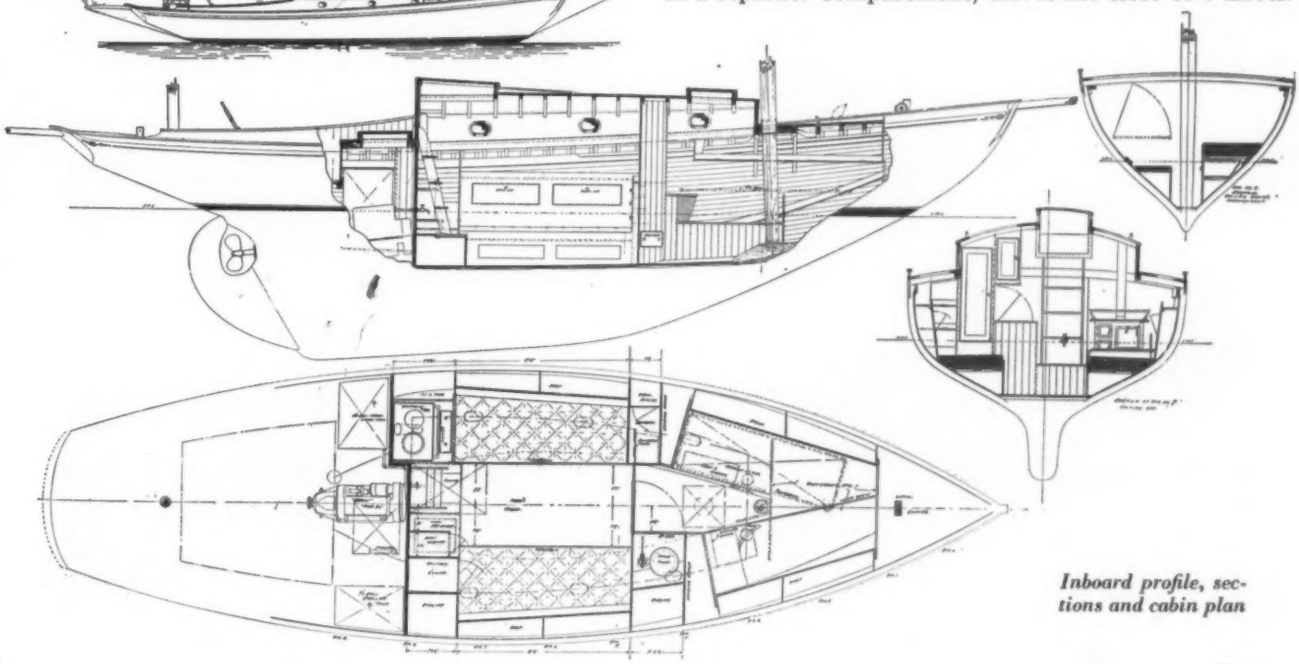
Sail plan of the 35-foot Alden-designed yawl

SEVERAL years ago John Alden turned out a little 32-foot auxiliary yawl of pleasing appearance, good accommodations, and considerable speed. So successful was she that more of the same type were built, with changes in design prompted by experience with the model. The design below is the latest development of this boat, two of which have already been built, one for George D. Olds, of New York, and the other for Reginald F. Johnson, of Boston and Bar Harbor. The dimensions are: l.o.a. 35′ 1″; l.w.l. 25′ 5″; beam, 10′ 2″; draft, 5′ 5″; sail area, 722 sq. ft.

In this new design, the designer states that a most distinct improvement has been made over former models, in speed, accommodations, and all-around ability. The beam has been increased slightly, and the lines of the underbody materially changed, resulting in a better boat in every way.

The arrangement below decks shows a more or less conventional 4-berth layout, with double stateroom forward and main cabin amidships, and wide berths, full headroom, and excellent floor space.

A Gray 4–30 motor, installed under the bridge deck in a separate compartment, drives her close to 7 knots.



Inboard profile, sections and cabin plan

Rhodes Turns Out an Attractive Auxiliary Cruiser-Racer

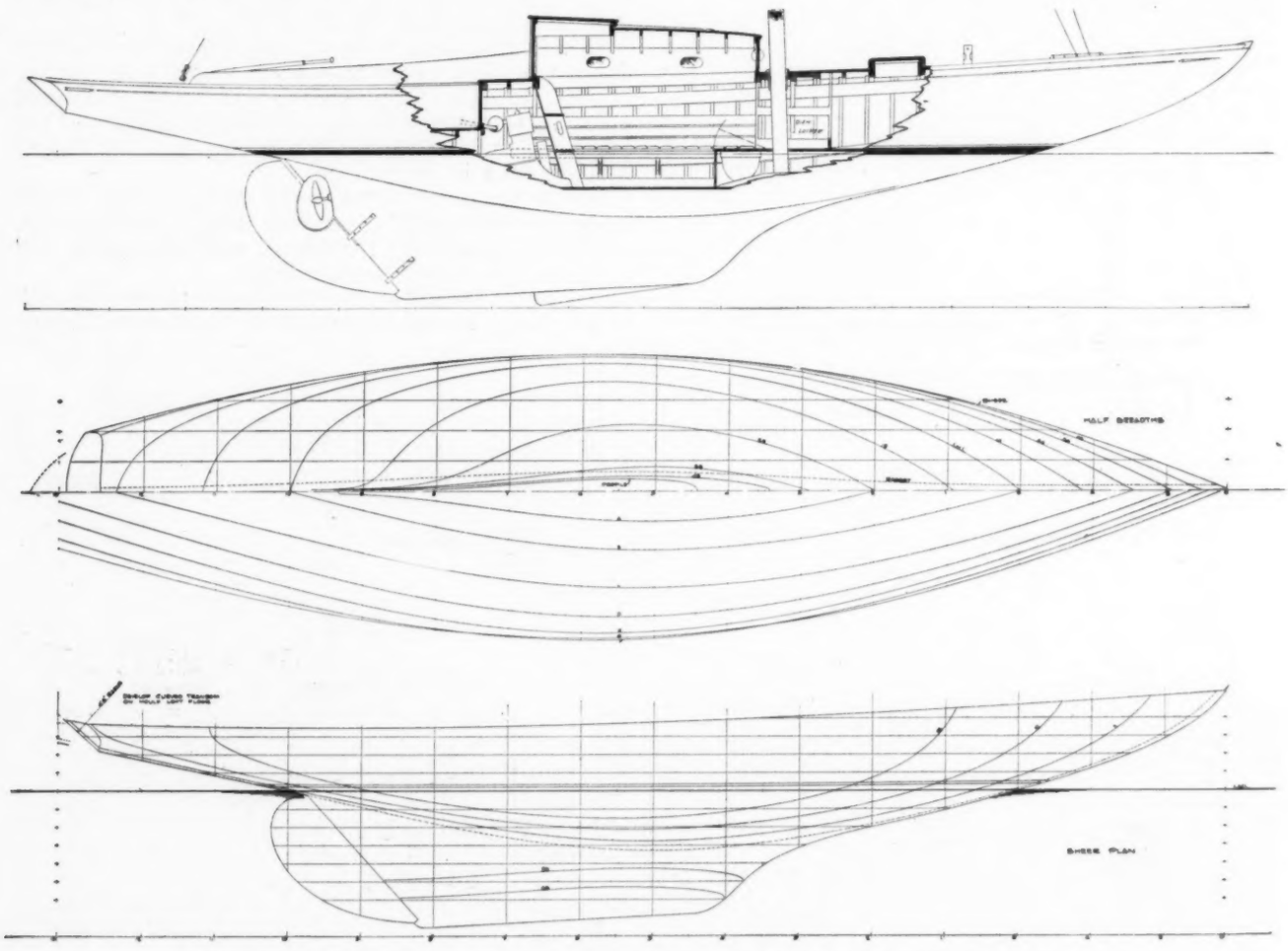
THE plans on this page show a very attractive little jib-headed sloop of moderate draft and a small motor, which were drawn by P. L. Rhodes for Gordon Taylor, of Jamestown, N. Y. Mr. Taylor wanted a good looking, fast craft which would be suitable for day sailing or short cruises, and this snappy sloop seems to fill the bill in every way. The dimensions are: l.o.a. 32′; l.w.l. 20′; beam, 7′ 6″; draft, without centerboard, 3′ 9″. The sail area is 355 sq. ft., with the entire rig well inboard and a permanent backstay to the counter.

The lines indicate that she should sail unusually well with her moderate, modern rig. The centerboard houses within the keel, and does not interfere in any way with the interior accommodations, the latter including two good bunks, a workable galley, toilet, and sufficient stowage space for short cruises. An unusual and desirable feature is the unobtrusive little single cylinder 6–8 h.p. Universal motor, which should drive her 6 to 7 miles an hour when the wind fails.

Sail plan

The construction, while not heavy, is sufficiently rugged for the type of hull. Planking is of Philippine mahogany, fastenings are Everdur bronze screws, and the keel is lead. Exterior and interior trim is African mahogany, spars are hollow, of airplane spruce, and decks and cabin top are canvas-covered. All fittings and hardware are of bronze.

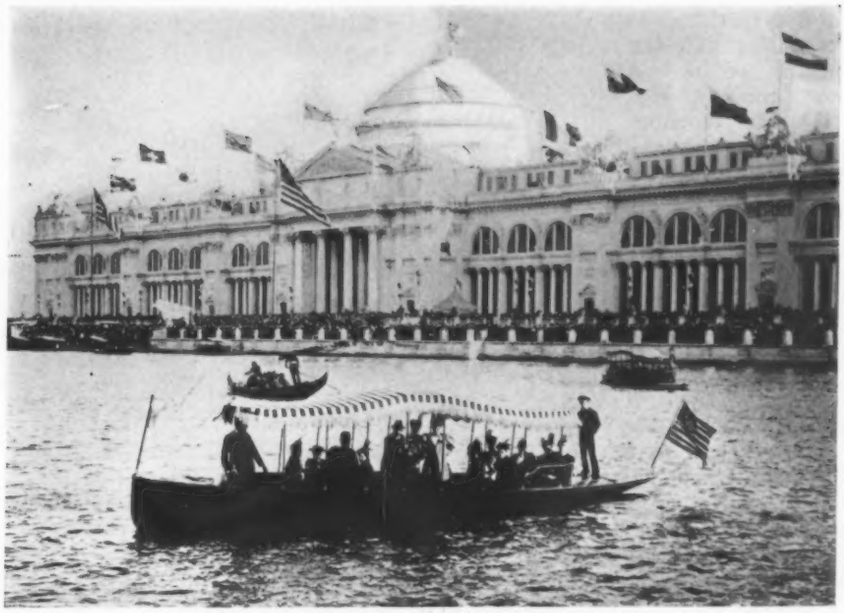
This boat has also been developed by Rhodes into a keel craft for those who have plenty of water in which to sail. Either model should make an excellent one-design class, and a good day sailer and cruiser as well.



Inboard profile, lines and sheer plan of the 32-foot sloop designed by P. L. Rhodes for Gordon Taylor

Forty Years of Motor Boat Development

A Long Record of Achievement in Standardized Cruiser Design and Construction



The first product of the Electric Launch Co., built forty years ago and used at the World's Fair, in 1893. Fifty-five of these electric launches were built for that event

FROM 1892 to 1932 is a long span of years to have spent in the development and building of pleasure boats. In the case of power-driven craft it covers the whole life of the use of the internal combustion engine for marine purposes, and marks a complete evolution in the type of boat in which these new power plants have been installed. It has been an era of small boat development such as has never been seen before. To have been building pleasure boats throughout these forty years is in itself a sufficient claim to fame. To have been a pioneer in the field and a leader in guiding the development of motor-driven craft for pleasure use must be a source of satisfaction.

It was forty years ago that the Electric Launch Company, now known as the Elco Works, started a career that was destined to be a prominent one in the then new industry. Even at that early date the corporation visioned the value of standardization in boat building, and was the first to adopt successful modern methods of construction in building boats in quantity. This was the result, probably, of an order for 55 electric driven launches, 36 feet in length, for use at the World's Fair, at Chicago, during the summer of 1893. This was a big order in those days — it would still be considered a big order today.

Not only in numbers was the order unusual, but it involved the successful use of a new driving force for boats. Up to that time practically all launches, or power-driven craft, depended on some form of steam plant, and in design they followed closely the smaller steam yachts of the period. Electricity was then the marvel of the age, though its uses were still limited. So the decision to use electrically propelled craft was revolutionary. But the electric fleet at the World's Fair, with its storage batteries charged from a shore station, performed so satisfactorily that the builders specialized in boats using this form of power until 1900, when the internal combustion engine was perfected to a stage where it furnished reliable power for marine use.

During those eight years many electric launches were built for pleasure use, and so well were they built that several of the earliest are still in use. Henry Ford bought one during that period, and he still has it.

Forty years ago no one could foresee what the trend in pleasure boat design — and demand — would be. But those who guided the Elco Company, themselves conscious of the charm and enjoyment of life on the water,

The 93-foot twin screw cruiser "Dixie," built in 1906, and the first yacht to make the trip from New York, via the Great Lakes and the Mississippi River, to Galveston

realized, even then, the potentialities that lay in opening boating to a greater number of people by the development of a practical, well-designed and economical craft, brought within the financial means of the many by standardized production. In achieving this aim, Henry R. Sutphen, the president of the company, who has been connected with it uninterruptedly since its organization, had much to do. Also, believing that the most enjoyment from a boat was to be had through cruising, the company decided to standardize on cruisers and to develop this class to the very highest standard of efficiency. Following this idea, the Elco Works has done much to bring the small power cruiser to its present high state of development and efficiency.

In 1904 Elco built this self-bailing, self-righting lifeboat for the U. S. Life Saving Service, the first power lifeboat of its kind

In the early years the shops of the company were located on the Harlem River, in New York City, but in 1900 a move was made into a new plant especially designed for standardized production, at Bayonne, N. J. Coincident with this move, was the production of the first gasoline engined boats, which at that time represented a new and much improved type, on the order of the present day motor boats. Thereafter the company specialized in boats equipped with electricity, gasoline, and Diesel engines.

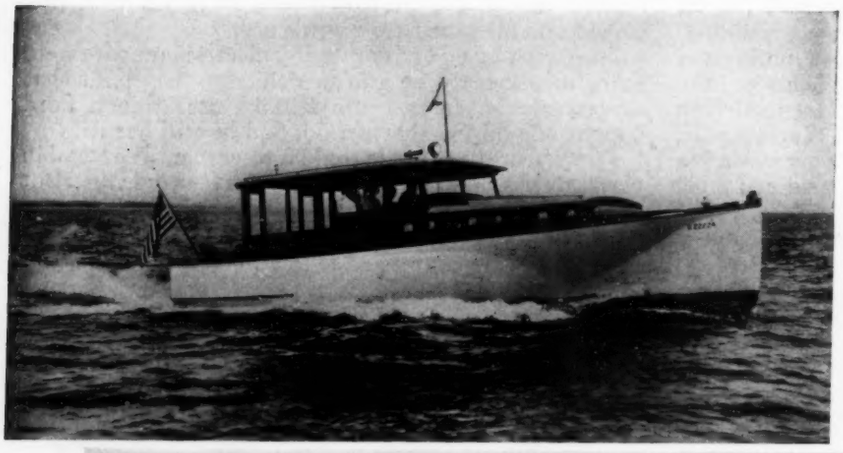
At this period the influence of the automobile was beginning to make itself felt, and Elco was one of the first to apply what had been done in the automotive field that was of value to motor boat development. At the Motor Boat Show of 1904, it exhibited a new type of craft termed an Auto Boat, with an automobile type of engine located forward of the steering wheel, under a metal hood. This is the craft that set the style for what have since become known as runabouts and have proved so popular.

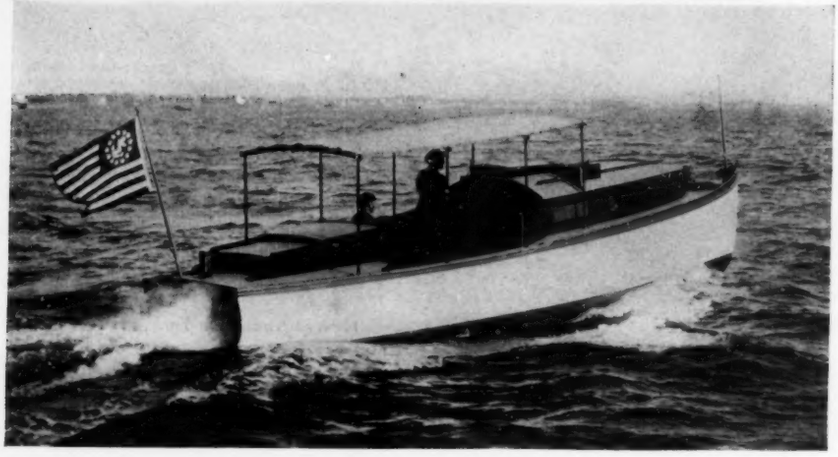
Eight years after the move to Bayonne, the company received what was, up to that time, the largest single order for boats ever offered to one builder, consisting of 120 work boats for the United States Army, and 32 mine-laying motor boats 32 feet long. This order for the Army Department was to be exceeded seven years later, during the Great War, when the Elco Works turned out no less than 704 patrol boats and submarine chasers, from 75 to 80 feet in length, for the Allied Governments, to be followed in 1917 by large numbers of the 110-foot sub-chasers for the U. S. Navy Department. This constitutes a record of boats supplied in a limited period for military use.

In view of the increasing popularity of Diesel power for yachts of the present day, Elco should be credited with another important pioneering achievement in its design and construction of the first Diesel motor yacht in the world, the *Idealia*, 84 feet, equipped with a Nelseco Diesel oil engine, and commissioned in 1911. This was an example of the builder's extensive experimental policy, since the *Idealia* was not built upon order, although she was afterward chartered for the United States Army.

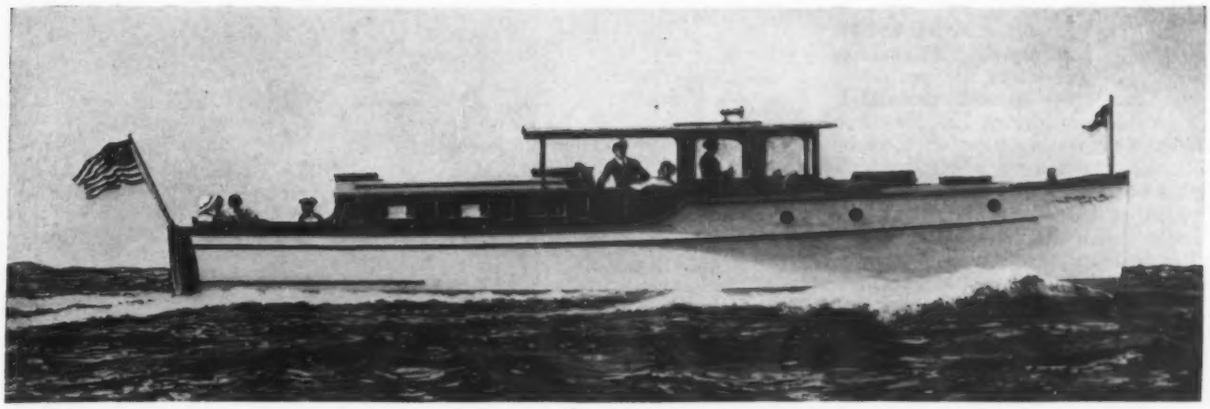
Perhaps the most famous development by the designing and engineering departments of the Elco Company, in charge of Irwin Chase, was of a small 32-foot cruiser called the Cruisette. Attaining immediate popularity by reason of the excellence of its design,

(Continued on page 155)





The original Elco Cruisette (left), built in 1914, was a double cabin affair, with the engine aft. After 18 years of intensive development she now appears as in the present model, shown above



The Consolidated Show Boat for 1932 is a double cabin cruiser with an enclosed bridge deck and a roomy cockpit aft. A 180 h.p. Speedway motor will give about 20 miles speed

The Coming Motor Boat Show

What the Visitor at the Grand Central Palace Will See at the Annual Exhibition

Consolidated Will Display 47-Footer

THE Consolidated Shipbuilding Corporation, Morris Heights, New York City, pioneer designers and builders of motor boats, cruisers, yachts and marine engines, will again be a prominent exhibitor at the coming Show.

Their boat exhibit will consist of a 47-foot, double cabin cruiser and will occupy space A-3 on the main floor. For several years past Consolidated has exhibited a highly finished mahogany cruiser, but this year they have varied their custom and will bring a painted boat to the Palace. The topsides will be white, decks of pine, with moldings, trim and coamings of mahogany. The engine will be a 180 h.p. Speedway. Her speed will be 20 m.p.h.

A 300 h.p. Speedway Diesel Engine will be exhibited in the same space, and on the fourth floor, in space 407, a complete line of Speedway marine gasoline engines will be shown. It is understood that two new Speedway models will be introduced.

It is interesting to note that Consolidated has used space A-3 on the main floor continuously at every Motor Boat Show held in the Palace and this year marks the 27th consecutive time that the Consolidated Shipbuilding Corporation has been an exhibitor. It will be remembered that the late John J. Amory, who was President of Consolidated for so many years, was the first President of the National Association of Boat & Engine Manufacturers, who sponsor the Show each year.

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Elco 40th Anniversary Fleet

ELCO will celebrate its fortieth year of boat building by exhibiting at the Show a Fortieth Anniversary Fleet, the finished product of their long experience in the field. The Elco Works began back in 1892 as the Electric Launch Company, and since that time have been pioneers in applying modern standardized construction to the art of boat building. And it has been through their methods of standardization and efficiency in building that Elco has brought prices to the attractive level of the 1932 fleet.

The 1932 Elco Fleet will offer the greatest range of models, the widest choice of arrangements to suit individual tastes and purposes, and the greatest price values in Elco history.

The Elco 24-foot Marinette (above) is the smallest of the 1932 fleet, but a roomy, able little craft, capable of extended cruising

The 42-footer by Elco offers everything in the way of comfortable cruising that one could ask for, and a speed of 12 to 14 m.p.h.

The new models will all have the Elco deck cabins as well as the protected steering seats and other distinctive Elco features which have proved so popular. Certain modifications have been effected which make the boats more in keeping with the tastes and requirements of the individual.

Other models which have become established favorites are continued in accordance with Elco's policy to make changes not merely for the sake of change, but only when warranted by improved features.

Individually and collectively the 1932 Cruisers, more than any previous Elco Fleet, will express the composite result of Elco's experience, and their customers' needs, combining sound improvements with time tested practices.

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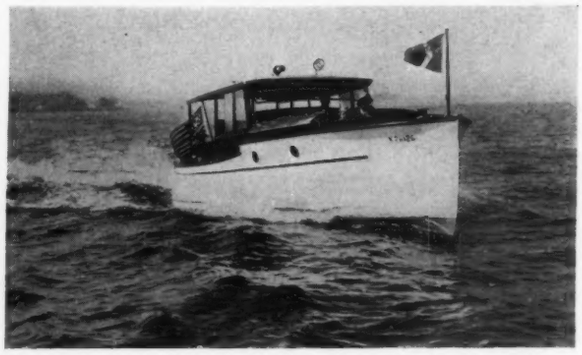
1932 A.C.F. Fleet

THE a.c.f. fleet for 1932 will offer the yachtsman eighteen stock cruisers ranging in size from 30 to 68 feet and in price from $3,980 to $58,900. These boats will add new emphasis to the a.c.f. tradition, which means beauty of line, reliable performance and superior quality of workmanship.



The 31-foot Veedette model, by Elco, is ideal for day use and for short cruises

There will be five 30-foot cruisers in the a.c.f. fleet this year. A single cabin cruiser will be offered to those who wish an exceptionally large cockpit aft for fishing, swimming, etc., and a comfortable cabin forward with berths for four persons. There will also be a double cabin model for the owner who wishes two separate cabins affording complete privacy. Then there is a cruiser runabout with speed, and outdoor space for water sports, yet with a large livable cabin, a complete and compact galley and a well-fitted toilet room.

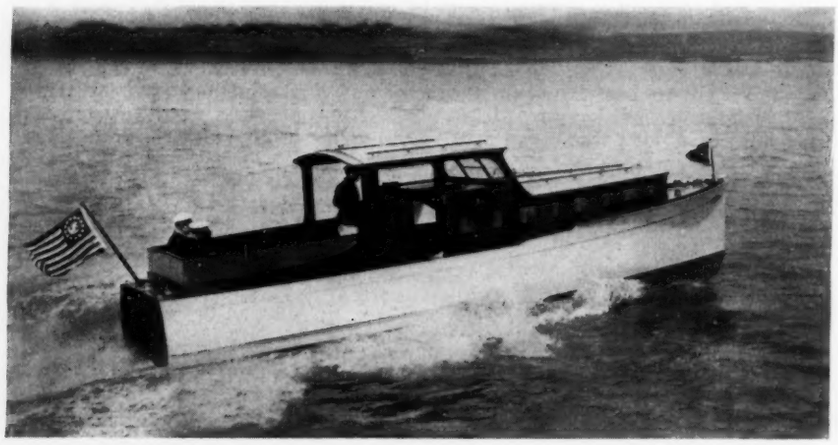
The 38-footer is designed with two open cockpits and a bridge deck which can be covered over if desired, and there are two motors which make for dependability. Because of its unusual design this 38-foot cruiser is smooth and powerful, has a speed of over 30 miles an hour and offers distinction as a commuter. At $11,900 it represents an unusual value.

The a.c.f. 39-footer matches the roominess one expects to find in the larger class cruisers. There are two toilets, two large roomy cockpits, and a spacious bridge deck. With its new twin-screw power plant and sturdy construction, this model is equal to hard and continued service.

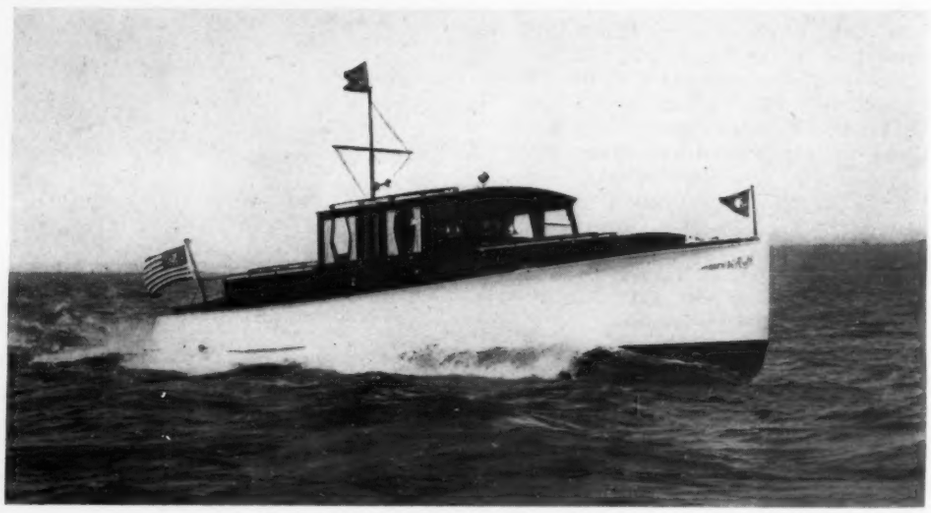
This year at the Show a.c.f. presents a new 46-footer. Suggestions were solicited from yachtsmen of known experience, and many of them are incorporated into this design, which approaches the "ideal" cruiser. Her smartness is apparent at a glance and her ingenious layout is such that one may walk from the bow all the way along either side, clear through to the stern, without intruding upon the privacy of a cabin. The a.c.f. 46-foot cruiser has everything that can be built into two cabins, a glass enclosed bridge which keeps the dining service out of the owner's stateroom and that of his guests, a cockpit aft and a space for the paid hand forward.

Two 40-foot cruisers are also offered, one single-cabin open cockpit model, and one double-cabin arrangement on the same hull. Both boats are powered with Hall-Scott motors driving through reduction gears.

The a.c.f. 47-footer makes an ideal family boat, with large after cabin,



The a.c.f. 30-foot single cabin cruiser is well arranged for cruising, with plenty of cockpit space as well



The largest a.c.f. exhibited at the Show is this twin screw 46-footer, which affords the maximum of comfort

The little 28-foot Wheeler Playmate. With a Chrysler Crown reduction gear motor, she will do 14½ m.p.h.

enclosed bridge deck, which at night provides sleeping accommodations, large after cockpit and crew's quarters. She is powered with a Hall Scott engine and, therefore, reliability is assured. A 54- and 68-foot standardized cruiser round out the a.c.f. fleet and bring to the yachtsman all the luxury and refinements of custom built boats at the low price made possible only by quantity production.

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Wheeler Playmates for 1932

IN general, the 1932 Wheeler "Playmates" will closely follow previous models in design and construction, but many refinements have been added. The 28-, 38- and 50-footers will constitute the large Wheeler exhibit at the Show.

Two 1932 models, on both the 23-foot and 26-foot hull, have been developed primarily for day cruising and therefore are provided with spacious cockpits, but at the same time they are equipped with necessary accommodations.

The new 28-footer is an improvement on last year's 28-footer and provides a spacious main cabin with large clothes locker, longer berths and more room. Besides the 28-foot cruiser, there is a 28-foot day boat having large fore and after cockpits, small forward cabin housing toilet, clothes locker and ice-box. A Chrysler Crown engine drives her 16 m.p.h.

The 30-foot sedan which has proved so popular will be the same as last year's model powered with a 180 h.p. Sterling Petrel engine. The 30-foot standard cruiser will be powered with a Chrysler Imperial motor.

Single cabin and double cabin cruisers will be available on the 34-foot model at reduced prices.

Wheeler will feature their 38-footer in four models with 150 h.p. Sterling engines as standard power, but Hall-Scott or Liberty engines can be installed where more speed is desired. There is the sedan model with many 1932 improvements, the double cabin model, the standard cruiser, and the sport cruiser.

The 41-footer is a double cabin, enclosed bridge model powered with 150 h.p. Sterling or 130 h.p. Buda. The accommodations of the 30-footer, plus crew's quarters, will be found in the 36-foot "Playmate," a raised deck type with forward cockpit, which will be very attractive in appearance and price. The 50-footer will be available in single or twin screw drive and Diesel or gasoline engines may be installed. Accommodations will take care of a party of eight and crew, and provide every comfort. This model will be on display for the first time at the Show.

The big 60-foot "Playmates" can be classed as cruiser-houseboats because they combine the comforts of a houseboat with the speed of a cruiser. They can be powered with gasoline or Diesel motors in accordance with the owner's preference.

The largest of the Wheeler fleet is a 70-footer on the general model of the 60-footer, but having more accommodations, which may be arranged to suit the owner's individual taste. Type of power plant is optional.

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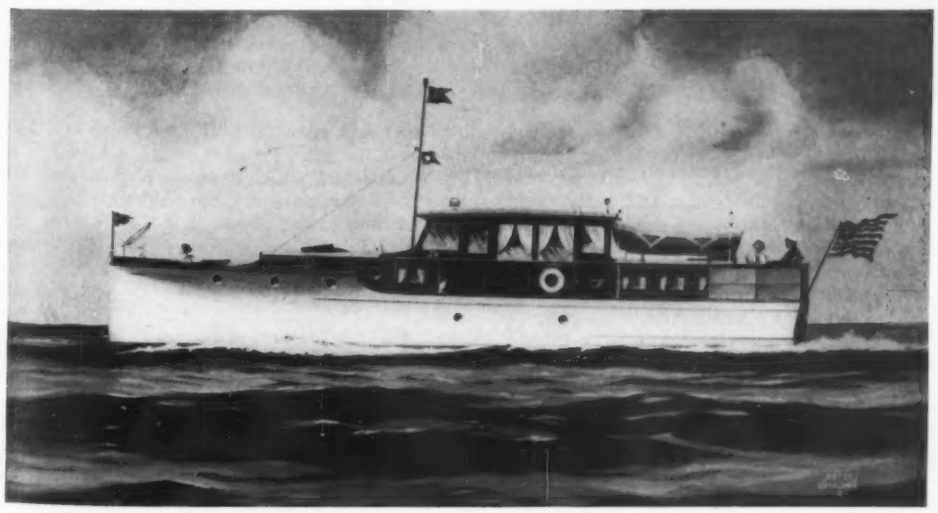
Eight Richardson Cruisers for 1932

THE Richardson Boat Company of North Tonawanda, N. Y., have eight models to suit the whims and fancies of exacting yachtsmen for 1932. Six of these

The 38-foot Wheeler Combination Sedan cruiser is an attractive model. Powered with a Sterling Petrel motor



The smallest Diesel cruiser at the Show is this 50-foot Wheeler, with a new 100 h.p. Winton-Diesel motor

are built on the 30′ long 9′ beam 2′ 4″ draft hull, and the remaining two are built on the 24′ 6″ "Baby" Richardson hull. The 30-footers are known as Cruisabouts and the following models are offered —A Single Cabin, Double Cabin, Vee-drive with open cockpit forward, Vee-drive with closed cockpit forward, Day Cruisabout and Aft Cabin Cruisabout. Those who want a smaller boat can have a "Baby" 24-foot Richardson with single cabin arrangement or a Day and Fishing Boat model.

The Single Cabin Cruisabout has accommodations for four. The cabin is comfortably large and has plenty of locker and stowage space for gear for extended cruising. Besides a roomy and airy cabin, there is a cockpit more than 12′ long with a large comfortable seat across the stern. This Cruisabout is powered with a 6–70 Gray marine motor and travels at better than 15½ m.p.h. The price is $3585.

The Double Cabin Cruisabout has practically the same arrangement, with the addition of a small stateroom at the stern. This cabin has two full length berths, a dresser with three drawers and a mirror and a space beneath the companionway steps for suitcase and duffle. A Gray 60–70 motor powers this Cruisabout which steps along at 15½ m.p.h. The price is $4185.

Because of the popularity of the Vee-drive Cruisabout, this model has been continued for 1932. This Cruisabout has large cockpits fore and aft with the cabin amidships. There are four berths, two large clothes lockers with shelf tops, toilet room and a galley. The motor is placed beneath the stern seat and deck and drives the propeller shaft through a Gray "Vee" reduction gear. With an 18-mile speed, this boat is an ideal commuter as well as cruiser. The price is $4385. There have been so many requests for a permanent canopy and glass enclosure over the forward cockpit that this model is also being offered with this arrangement.

The Day Cruisabout has a toilet room cabin forward and a 19-foot cockpit aft. A windshield protects the cockpit forward, and a canopy extends for half of its length. This boat, ideal for fishing, passenger, and yacht tender service, travels at a maximum speed of 22 m.p.h. with a Gray 8–110 motor. This model is priced at $3685.

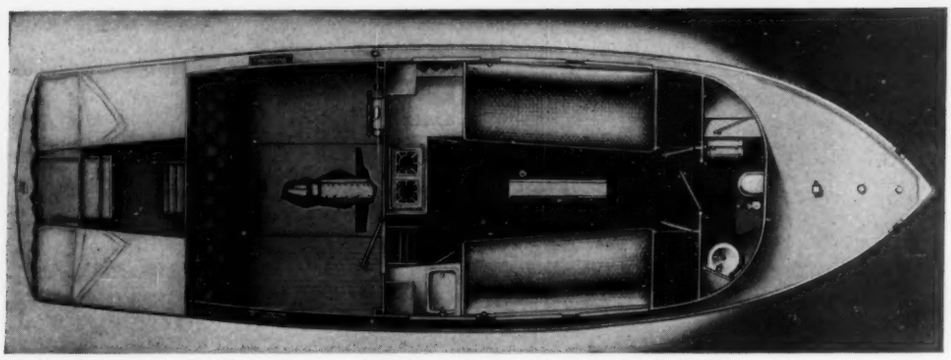
The sixth model of the Richardson fleet is the Aft Cabin Cruisabout, which has a dressing and toilet room forward. Abaft this cabin is a 9-foot cockpit, canopy-covered and windshield-protected fore and aft. The main cabin extends from amidships to the stern of the boat and is fitted with four berths, a three-drawer dresser, a large clothes locker and a complete galley. A Gray 6–70 Marine motor gives a 15½-mile speed. The price is $3985.

There is full headroom in the cabins and cockpits of all the Cruisabouts and the 1932 models have been dressed up considerably to make them even more attractive than their predecessors. The decks are of beautiful shamrock green and the superstructure is of selected Philippine mahogany. The windshields are slanted and the curved canopy top gives a lower appearance to the boats.

The "Baby" Richardsons, 24½′ long, 8′ 2″ beam and 2′ 2″ draft, are in the low price field. These cruisers are built in two models. A Single Cabin type, with toilet room, four berths and galley below and canopy protected cockpit, and powered with a Gray 6–50, has a 15½ m.p.h. speed and is priced at $2400. The "Baby" 24½-foot Richardson is also offered as a low price day and fishing boat equipped with toilet room and cockpit large enough to carry 20 or 25 people. The power is a Gray 6–50 which provides a speed of 15½ m.p.h. and the price is $2200.

Those interested in low-priced single-handed cruisers of good design and quality construction should be sure to visit the Richardson exhibit.

The "Baby" Richardson, 24½ feet long, has a surprising amount of room in her for a boat of this length. A Gray "50" is said to give 15 miles



Left. The Richardson Double Cabin Cruisabout provides excellent accommodations for cruising, as this layout photograph shows

Cape Cod 15-Foot "Nimblet"

SHOWGOERS interested in small sail boats or in inaugurating small one-design racing will find in Charles S. Gurney's latest design, a 15-foot Marconi-rigged sloop built by the Cape Cod Shipbuilding Corp., a smart sailer and ideal little racing boat. *Nimblet*, as this design will be known, is a centerboarder drawing 5 inches. She is knockabout rigged and will comfortably seat four persons for afternoon sailing.

In keeping with the well-known standard of Cape Cod boats, the *Nimblet* will be built of excellent materials with selected Virginia cedar planking, British Columbia red cedar deck, and Douglas fir spars. Light materials are used so that her total weight of 375 lbs. makes her light enough to permit ease of transportation from lake to lake, or to various harbors. The total sail area of 99 square feet is spread on a 15-foot hoist and 11-foot boom.

Nimblet, which is priced at $539, will be displayed at the Cape Cod Shipbuilding exhibit at the Show.

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Sparkman & Stephens Booth

INCLUDED in the wide selection of sail and power boat plans which may be seen at the Sparkman & Stephens booth will be the lines of *Dorade*, winner of the Transatlantic and Fastnet races. Several new creations from the board of Olin Stephens will be on display, along with his other well-known designs. Added to

the blueprints and photographs will be a number of interesting models from these designs.

Besides plans for new boats, a complete brokerage file of yachts, both sail and power, available for sale or charter, will be on hand for buyers in the second-hand market or those interested in charters. Photographs and complete descriptions of these boats will be obtainable at the booth.

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Gray Models for 1932

GRAY MARINE ENGINES for 1932 will be presented to the public in three distinct groups. Five new engines especially designed for runabout and high-speed work have been developed. They will be known as the "Phantom Series," and are rated at 32, 49, 66, 93 and 150 h.p., the last being the improved Gray Phantom "Eight."

double ignition, unusual compactness and accessibility, and a highly specialized design, carefully worked out to meet the requirements of this class of boats.

In addition to these new engines, the "Light-Four," the Gray "Four-30," "Four-44" and "Four-56," "Six-50," "Six-70," "Six-72" and the Gray "Cruiser Eight" will be continued. All of these engines have already earned a very definite place in the marine field. The complete Gray line for 1932 includes fifty different sizes and styles of marine engine completely covering the field up to 150 h.p.

The choice of three ratios of built-in reduction gears is available with several sizes in each of the four-, six- and eight-cylinder types. The Gray "Vee-Drive" gear, which has thoroughly demonstrated its value during the past three seasons and which is used in several standardized cruisers and runabouts, will be available at lower prices for 1932.

The Richardson 30-foot Double Cabin Cruisabout, the accommodations of which are shown on the opposite page

Equipped with a new Gray motor, this little 13-foot monoplane, by the Hacker Boat Co., is capable of a speed of 36 m.p.h.

The Gray Phantom series will present a highly specialized design for high-speed work in fast boats only. These engines will all be on exhibition at the New York Show and complete details and photographs will be available. It was with a Gray motor that the *Phantom* made her record of 45.89 m.p.h. in the International 5½ Litre Class two years ago.

Gray will also present a complete line of heavy-duty cruiser, workboat and auxiliary engines, which will be known as the High Torque Series. These engines are all designed to turn large propellers at medium engine speed in slow and heavy boats, and will be built in several sizes of fours, sixes and eights, featuring

Casey Offers Choice of Plans

PLANS and photographs of auxiliaries from 30 feet up to 55 feet, having different combinations of rig, will be exhibited by the Casey Boat Building Company, Inc., of Fairhaven, Mass.

Blue prints of the 30-footer will show sloop, cutter, yawl and ketch rigs. The 34-footer is rigged as ketch or yawl, and the 38-footer as sloop and yawl. Cutter, yawl, ketch and schooner rigs are available in the 41-footer. The 45-footer is ketch-rigged only, and the 49-footer ketch- and schooner-rigged. The largest auxiliary is the 55-foot schooner.

There will be plans for fishermen from 35 to 65 feet, and fishermen cruisers from 40 to 50 feet.

In the Casey booth there will be on display marine hardware products of Everdur bronze which are used in the construction of Casey boats.

Prospective boat owners should find in this wide choice of plans just the boat for their needs, and boats which the Casey reputation assures will be well built at an attractive price.

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New Whitneyachts

THE Whitney Woodcraft Corp. will continue their policy in 1932 of building several models for the man who is willing to pay a little more in order to have the best that can be built. Under this principle Whitney is adding to their 36- and 42-foot models a handsome 47-footer for the yachtsman who wishes the last word in luxury. The 47-footer is an enlargement of their former 41-foot model and provides crew's quarters.

For the man of more moderate means Whitney offers the 34-foot model and a new 25-footer which will be exhibited at the Show. This new addition to the Whitney fleet has a unique cabin layout, an arrangement which is a radical departure from usual practice. The galley is placed in the forward end of the cockpit, where there is ample room, light and air. This new location provides a cool and convenient place to work, which, when not in use, is closed off by a curtain.

Below decks there are comfortable accommodations for four, a spacious lavatory, and a large hanging locker in the bow of the boat. A 4-cylinder Farr drives the 25-footer better than 12 m.p.h.

Complete information on the six Whitneyachts will be available at the Whitney exhibit at the Show.

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Three Marbleheads in Staples, Johnson Line for 1932

STAPLES, JOHNSON & CO. will offer single and twin-screw models in their line of three Marblehead cruisers for 1932. The 34-foot hull designed by Eldredge McInnis is standard on these models

and will be on display at the Show. This model was given a severe test when it recently traversed 4500 miles of nasty sea on a trip from Maine to Mexico.

In the 1932 Marbleheads are embodied many improvements, such as special sound-proof engine compartments, larger and heavier copper tanks, specially designed hardware, etc. These models will be considerably faster than their predecessors.

The new models provide a variety of cabin arrangement with the Single Cabin Marblehead offering either single or twin-screw drive. The Twin-Stateroom Marblehead sleeps six in two staterooms, arranged *en suite*, with washroom and galley between. The Marblehead Deep Sea Fisherman, powered with twin engines, can be had in three arrangements — single cabin, twin stateroom, or main cabin and crew's quarters.

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1932 Fairform Flyer Products

THE Huckins Yacht Corp., builders of Fairform Flyer boats and products will exhibit at the Show one of their offshore model Forty Fives, and a section of Fairform laminated keel, Fairform silent electric toilet, Fairform bilge pump and Fairform leak alarm.

The Offshore Forty-Five has always been Huckins' most popular model and has been especially designed, as the name implies, for hard service at high speed. On her rated cruising speed of 20 m.p.h. she has a cruising radius of 240 miles, while her top speed is 27 m.p.h. Two 200 h.p. Kermaths deliver reliable power to twin screws.

On an overall length of 45 feet, beam of 11 feet and draft of 2 feet 8 inches she has spacious accommodations for six, and a crew of one. Abaft the large forward cockpit is the owner's double stateroom, with lavatory. Next comes the bridge deckhouse with engines below and, stepping down into the main cabin, there is a second lavatory with shower opposite, and then the main cabin with two double berths. The galley is aft.

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Falcon Motors

A FULL line of Falcon motors will be shown by the United States Motors Corporation, of Oshkosh, Wisconsin. They will be of both medium and high speed types, from 5 h.p. up to 90 h.p., many fitted with reduction gears. Two new models, details of which have not yet been released, will be on exhibit.

New and Old Model Palmer Motors

A COMPREHENSIVE exhibit of new and old model Palmer motors will be shown by the Palmer Bros. Engine Co., of Cos Cob, Conn.

The first newcomer is the Storm King, a 6-cylinder motor with bore of 4½" and stroke of 6", developing from 60 to 80 h.p. at moderate speeds. Cylinders are cast in blocks of three, but the removable head is in one piece. The crank case is in two halves, with clutch housing a separate unit. The motor is equipped with downdraft carbureter, fuel pump, tachometer take-off, 12-volt, 2-unit starter and generator, and Palmer clutch. Inlet and exhaust manifold are water jacketed to form an efficient hot spot.

The second new model is a Palmer Ford Conversion, a real marine job done on the new Model A Ford motor. Palmer Bros. have used both the outstanding features of Ford and Palmer to produce a splendid marine power plant, with Palmer marine pump assembly, water jacketed intake and exhaust manifold, and all the necessary fittings to make a thoroughly satisfactory marine installation.

The other Palmer models to be shown are: YT1, 1-cylinder, 2 h.p.; PNR3, 3-cylinder, 18 h.p.; ZR2, 2-cylinder, 18 h.p.; ZR4, 4-cylinder, 40 h.p.; Little Huskie, 4-cylinder, 15 h.p.; Power Boy Six, 6-cylinder, 40 h.p., P.A.L., 4-cylinder, 25 h.p.; H.H., 2-cylinder, 5 h.p.

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Ailsa Craig Acro-Diesels

FOR forty years the Ailsa Craig Motor Co., Ltd., of London, England, have specialized exclusively in the manufacture of small marine motors, and about three years ago, after years of intensive development, produced the Ailsa Craig Acro-Diesel Engine, two models of which will be exhibited at the show.

The Acro system was adopted because it assures an absolutely clean exhaust, remarkable flexibility, and great ease of control, three of the fundamental requirements in a marine engine. Interest in these engines centers around the fuel injection

The Sea Sled models (above) are now appearing with full cruising accommodations

The 34-foot Marblehead single cabin cruiser, by Staples, Johnson & Co., contains many new features for 1932, including a sound-proof engine room

system and the construction of the piston, both of which are applied under license from the firm of Robert Bosch & Co., of Stuttgart, Germany. The smoothness of operation is said to be remarkable, the "thump" so noticeable in some Diesels being entirely absent. The reliability and efficiency of these motors has been well demonstrated by installations in the Spanish fishing fleet, where the 2-cylinder, 20–30 h.p. models, with very little intelligent attention in very hard service, have given every satisfaction, with many repeat orders as a result.

The two models to be shown are the 2-cylinder, 12–16 h.p. engine and the 4-cylinder, 40–60 h.p. engine. Besides these, the company is in production of 4- and 6-cylinder models in powers up to 90 h.p., and a 125 h.p. model will soon be ready. The smaller models are hand-started, and the larger ones electrically-started. All of the models look very much like ordinary gasoline motors, and it is claimed that they more nearly approximate the weights and dimensions of gasoline motors than any other Diesel motors now on the market.

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Duplex Marine Oils

EACH year the display of Duplex marine engine oils is counted one of the real attractions of the accessory division of the Show and the 1932 exhibit not only is a worthy successor of previous years, but it is said that it will be even better than heretofore. A steering wheel mounted on a conventional standard is in the center of the exhibit and Duplex printed matter will be available to the visitor on two tables at the aisle. In addition, there will be an attractive display of Kasson Waterproof Grease, a product known in marine circles for its ability to furnish certain lubrication in the presence of water. Kasson was the product used by Frank Wigglesworth in winning the Dodge invitation race as a hull surfacer to reduce skin friction. Wigglesworth said after the winning of the Dodge race that he attributed part of his increase in speed to the use of Kasson on the hull.

Two attractive signs in the Duplex booth call attention to the fact that Duplex Marine Engine Oil is specified for use by 85% of the leading boat and engine builders of the country, and also that it is the holder of virtually every inboard record.

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Lister Diesel Generators

PEET & POWERS, sole agents in the United States for R. A. Lister & Co., Ltd., will show several electric generating sets run by Lister Diesel motors. The Lister Diesel motor is well known abroad not only for economy and power, but also for remarkable smoothness of operation and ease of starting when stone cold, a combination of qualities extremely difficult to produce. Henry R. Ricardo, of Ricardo & Co., consulting engineers, has this to say of the Lister Diesel: "As regards smoothness of running, we have certainly never had any other heavy oil engine on test in our laboratory which would compare with this engine, the running of which at all times is as smooth as that of a good gasoline engine."

Included in the exhibit of Peet & Powers will be the following: 2½ k.w., 110 volt Diesel-driven generating set, fitted with circulating pump for cooling; 2½ k.w. generating set with belt drive, lighter in weight and lower in price; 15 k.w. generating set; 2-cylinder, 18 h.p. Lister Diesel engine, fitted with marine reverse gear integral with engine, circulating pump and water cooled silencer; 1 k.w. generating set, running at 1000 r.p.m.

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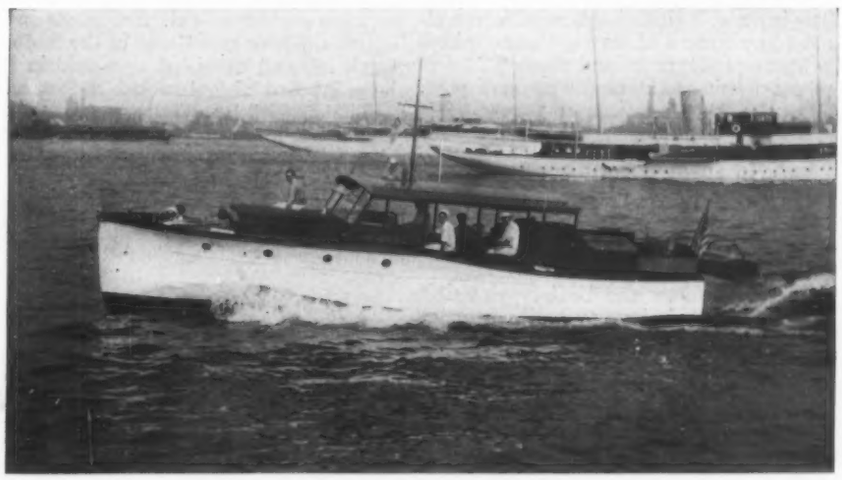
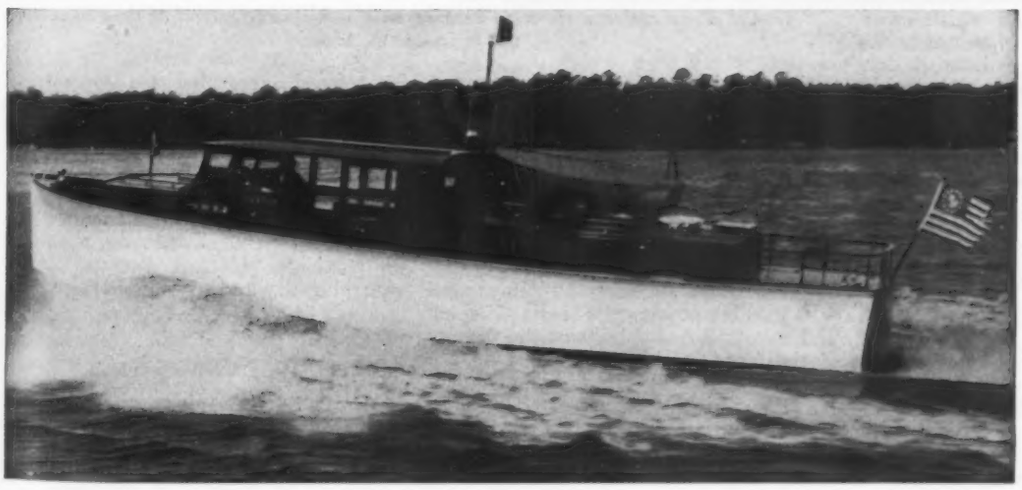
Toxicop, A New Bottom Paint

IN ADDITION to exhibiting their line of well-known marine paints and varnishes, the C. A. Woolsey Paint & Color Co. of Jersey City, is introducing a new bottom paint which is branded "Toxicop." This latest product of the Woolsey firm is the result of seven years of experimenting and testing under natural and abnormal conditions.

Toxicop is a wooden bottom paint which is guaranteed, under a six months' replacement offer, to provide ideal exfoliation, positively to repel accumulations of barnacles, teredos and marine growth of every description, thus solving that exasperating problem of every boat owner.

At the Woolsey booth, on the third floor, there will be exhibited several wood





The 42-foot Whitneycraft cruiser. Speed, 26 m.p.h. with two 200 h.p. motors

Huckins Fairform Flyer, 45 feet in length, and with a top speed of 27 m.p.h.

panels which were painted with Toxicop and immersed in the water at Montauk Point for nine months without being disturbed, and which now present a clean surface barely showing indications of the long submersion. Toxicop is a copper paint of good body available in red or brown.

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A Red Wing Sloop

THE Luders Marine Construction Co., of Stamford, Conn., builders of high-grade power yachts and cruisers, will furnish one of the sailing craft seen at this year's Motor Boat Show. This is one of the company's famous little Red Wing sloops, designed and built as a one-design class of small boats for racing and day sailing. Of unusually fine construction and finish, these little craft are 15′ 9″ long over all; 11′ 9″ on the water; 5′ beam and 2′ 9″ draft, the keel carrying 325 pounds of iron for ballast. The total sail area, in jib and mainsail, is 150 square feet.

The new model this year retains all of the best qualities of the former models, together with some improvements and slightly increased dimensions. This latest model is of round bottom design, instead of being built with a chine, as heretofore. She is an able little boat suitable for almost any waters where yachts are sailed.

Many photographs and plans of Luders power-driven craft will also be on display.

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Old Town Canoes and Boats

THE Old Town Canoe Company, well known for its many years of faithful service to those who follow the water, will present at the Show twenty-two different models of canoes and boats, painted in many colorful designs and with assorted equipment. Because of the growing interest in canoe sailing, a new sailing canoe will be exhibited.

At least four of the Old Town Dinghies, which for thirty years have been one of the company's principal products, will form a part of the exhibit on the fourth floor. A number of models which have been designed especially for use with outboard motors promise interest for showgoers looking for this popular combination.

Prices for the coming season have been substantially reduced on nearly every model and all those interested in small craft will find them very attractive.

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Sea Sleds

THE Sea Sled Corporation, of West Mystic, Conn., will add to their comprehensive line of Sea Sleds for 1932 a new 14-foot centerboard Oldfield Class sailboat and a 30-foot Sea Cruiser in addition to their 22-foot Sea Cruiser. The only other change in this well-known line will be to offer optional stern drive in the model "20" Sea Sled.

The Luders Red Wing sloop, a one-design model for racing and day sailing, 15′ 9″ in length

There are six Sea Sled models designed for use with outboard motors, which include a 13-foot Class B and standard model, a 14-foot runabout, a 16- and 18-foot standard runabout and an 18-foot express cruiser model. Sea Sleds with optional power are offered in the 20-foot, small inboard runabout class and in the large inboard 22-footers and 26-footers.

The 22-foot Sea Cruisers are offered in two cabin arrangements, each model available with a choice of two power plants. The open cockpit model may be powered with a 41 h.p. or 50 h.p. Gray, and the bridge enclosed model with the same power plants.

An Old Town outboard runabout banking on a sharp turn. Several of these models will be seen at the Show

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Seaman Sea Skiffs

ON THE fourth floor those interested in small power craft or dinghies will find an attractive exhibit in the display of the latest models turned out by the Seaman Sea Skiff Works, of Long Branch, N. J. For dinghy purposes the Seaman 10-foot Skiff admirably fills the bill. Besides being an easy model to row, it may be sailed, or used with an outboard motor.

Along with the Seaman 16-foot outboard Sea Skiff there will be exhibited a 16-foot inboard Sea Skiff powered with a 4-cylinder, 4-cycle Van Blerck motor. This five-strake Sea Skiff may be optionally fitted with the Van Blerck American drive to enable surf fishermen to get off on the beach through the surf.

Completing the Seaman fleet there will be an 18-foot de luxe runabout, powered with a 45 h.p. Farr, of the powerful five-strake-high model which makes an able and fast boat in any water.

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Dyer "Dinks"

THE Dyer "Dink," which will make its début to yachtsmen on the ground floor of the Grand Central Palace during the Show, has been developed to provide the long-felt need of a sailing dinghy that would serve equally well as a rowing tender or outboard tender; be small enough to carry on deck and large enough to row a crowd of six or seven out to the mooring. The little 11-footer with her 54 inches of beam fills this bill perfectly, with plenty of good looks to spare.

She is a sort of lap-straked Dutch model, which gives her a full bow and fine run, making her remarkably easy to tow even with a man seated in the bow. The centerboard trunk is low and covered so that water will not spout through when towing. The pennant of the pivoted galvanized centerboard is brought through this covering in a small tubing. The spars are all ten feet long so that they can be stowed inside the dink, and the sails may be colored, according to the owner's choice. They are made by Herreshoff, of Wamsutta duck. A fender 2½ inches in diameter runs entirely around the boat and is filled with Kapok, which will support three adults in the water.

This little design, which has been developed after intensive study, should be of particular interest because of its general utility and reasonable price.

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1932 Century Boats

FEATURING its air-cushion, hydraulic action boat bottom, on which patents are pending, and a complete line of small boats, the Century Boat Company of

Manistee, Michigan, will bring to the Show nineteen all-mahogany models, including six outboard racing boats, five outboard service and de luxe runabouts, and eight distinctive inboards.

The "air-cushion bottom" has been adapted to every new Century model. Seven years of experimenting and testing, and two seasons of development in actual service precede the formal announcement of this outstanding development.

Leaders of the 1932 Century fleet include the "Waltonian," a new, quality outboard craft, 13 feet long by 54 inches beam, natural finished all-mahogany construction, which lists at $98.50, and an inboard craft at the low price of $497.50, the "Pioneer." The latter is a 16-foot, 66-inch beam, all-mahogany, six-passenger craft, powered with the Gray Light "Four," husky and attractive, designed for family and utility purposes.

"Sea-King" is the designation of Century's most pretentious creation, a 22-foot runabout of sporty lines and de luxe equipment. This craft has a torpedo stern, and is powered with the Gray Phantom "Six," transmitting through the Gray Vee-drive. Seating arrangement is for six, in two chummy cockpits.

The Sea-Maids "49" and "65" are also additions to the Century line: 18-footers utilizing the Gray Phantom "Four" and the Gray "6–65" motors, respectively, with the Johnson stern drive. Natural finished, the seating arrangement is for six. The Sea-Maids "46" and "47" are 16 and 17 feet long, respectively, powered with the Phantom "Four" amidships, and seating five and six passengers. These

One of the 49-foot standardized auxiliary schooners built by the Casey Boat Building Co.

dropped in price, and likewise the smart Black Demon and the Scamp.

The last of the fleet is the new "Rascal," 14 feet long with 58 inches beam and ample freeboard, seating six comfortably, of natural-finished mahogany and with the air-cushion bottom.

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A New Dawn "48," and a "30"

A NEW model of the well-known Dawn cruisers will be found this year in a 48-footer which shows many refinements which they have experimented for a year, and in which are incorporated features that make it distinctly unusual. This model will have the power plant aft, which has many advantages, with a "Vee" drive. This permits a more economical use of the hull space for accommodations. In this model two different cabin arrangements are offered the buyer. The cabin is amidships and there is a forward cockpit from which the boat is controlled. Of the usual Dawn high-grade construction, this model is priced at under $5000.

The others of the Dawn line for 1932 will consist of the standard 45-foot cruiser and a 60-footer, while in between is a 50-footer with a "Vee" stern drive, details of which will be announced at the Show.

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Robinson Custom-Built Commuters

ONE of the reasons for the popularity of the boats made by the Robinson Marine Construction Company of Benton Harbor, Mich., is the capacity of the company for producing custom-built boats to express the individual tastes of clients at prices that are not too hard on the purse strings. An example of this is the new 32-foot Sport Boat priced at $4950 and up, and made available in a wide choice of arrangements and a variety of custom designs in day cruiser, enclosed sedan, special shelter cabin runabout, yacht tender and sport fishing boat styles at the option of the client.

Robinson Sport Boats are trim, compact and easily handled craft having a semi-round bottom design offering remarkable stability. They are 32 feet in length with a beam of 9 feet, 2 inches and are built throughout of the finest African mahogany and white oak construction. All fittings are chromium-plated and the upholstery is of genuine leather lavishly used wherever convenience or comfort are to be served. Standard power in the Robinson Seagull Sport Boat is Kermath's 225 h.p. "Sea-Wolf" which gives speeds of 30–32 miles per hour in this sturdy craft. Capacious gasoline and water tanks coupled with the economical operating cost make the Sport Boat ideal for extended fishing or cruising expeditions — especially when used as a yacht tender in foreign waters.

Besides this series of custom sport styles, the Robinson Company has been extensively engaged this last year in building cruisers, commuters, runabouts, yachts and sail yachts to custom order up to 90 feet in length and has enjoyed a flattering amount of business of this kind.

A Robinson Seagull Custom Commuter of especial importance to the particular yachtsman was placed on exhibition some time ago in Chicago. This handsome craft was an entirely new design, 36 feet in length, with an attractively finished forward cabin having sleeping accommodations for four. The power plant consists of two 6-cylinder Universals.

A Century Cyclone model outboard racer

models list at $895 and $985 respectively, and develop speeds in excess of 35 m.p.h.

"Scout" is another low priced utility inboard, 16 feet long with 66 inches beam, and high freeboard, powered with the Phantom "Four" motor. The famous "Century Thunderbolt" has been reduced in price and with the Gray Racing "Four" motor gives an honest 43–45 m.p.h.

Century outboard raceboats have been materially reduced in price. The Midget A is now $175, the Midget BC $200, the Cyclone $225 and the Hurricane $250. The Pee Wee for sub-A class is $125, and the new Whirlwind, a 50 m.p.h. outboard racing runabout, $275.

The popular Traveler, aristocrat of the outboard fleet, 16 feet long, has been over the previous models. Perhaps the most important of these changes are the deckhouse and the flying bridge controls, which allow the handling of the boat, at will, from either position. The flying bridge has also been considerably increased in size and a comfortable lounging seat has been added.

With a pair of 180 h.p. Sterling Petrels a speed of 22 to 23 statute miles is obtained, while if greater speed for commuting purposes is wanted a pair of Hall Scott Invaders will step her up to 26 or 28 m.p.h. There are two staterooms for the owner and his party, and quarters for a crew of two.

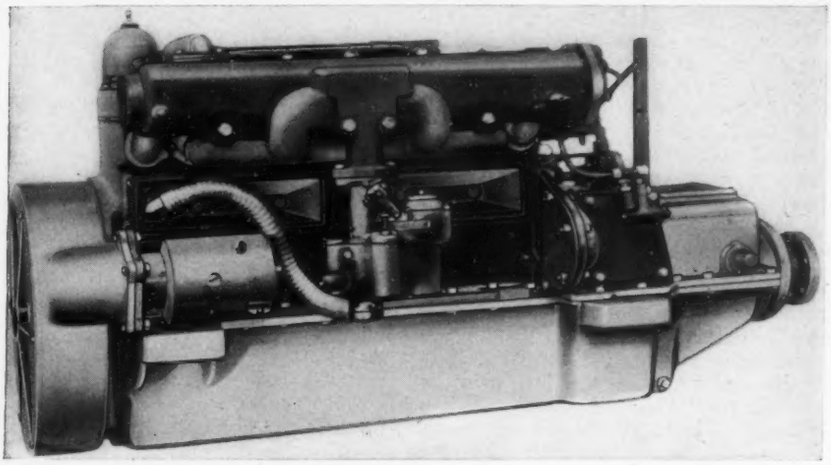
This year the Dawn Boat Corporation will introduce a new 30-foot cruiser with

A New Model Is Added to Comprehensive Scripps Line

THE usual interest in the Scripps line of marine engines, will be augmented this year by the introduction of the new "150," an entirely new series to be shown for the first time at the 1932 Motor Boat Show.

With the addition of the "150," the Scripps Motor Company has a total of 27 different models which provide suitable power requirements for any craft, from an 18-foot tender to a 100-foot yacht. Starting with the 4-cylinder, F-4 (medium speed), developing 40 h.p. at a range of 1000–1600 r.p.m. and the Model 84 (high speed), developing 75 h.p. at 3000 r.p.m., the Scripps line ranges upwards to the popular 6-cylinder 202 model which develops 200 h.p. at 2300 r.p.m.

Where a power plant of over 200 h.p. is required, the Scripps Motor Company offers eleven models for twin installation, giving a combined power range of 250 to 400 h.p. Scripps twin installations are unique in that both engines are symmetrically matched with true opposite rotation and construction. Since the only difference in the two engines lies in the assembly of parts, only one set of parts need be carried for service, and the saving thus made possible is reflected in the cost of the engines, the price of a right hand engine being no higher than that of the corresponding left hand engine of a twin pair. Because of the added security of two independent power plants, the lack of vibration, and the greater maneuverability, the Scripps twins are proving extremely popular for medium speed cruiser work.



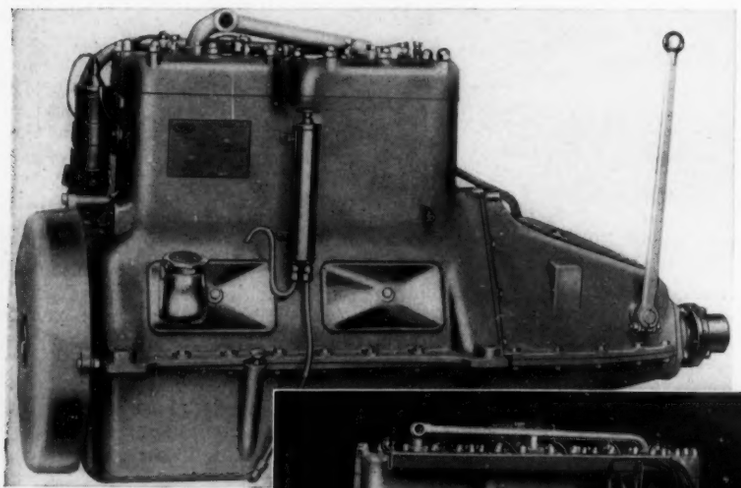
The new Red Wing Courier model, 30–65 h.p. high speed motor, with aluminum base

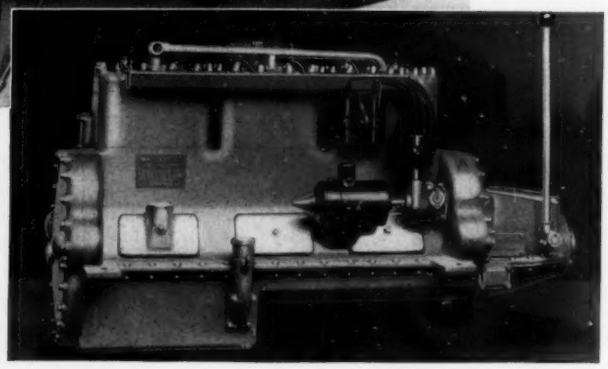
The new "150" series is also available in twin installations. It is a 6-cylinder engine of 4¼" bore by 5¼" stroke. The medium speed cruiser model, developing 100 h.p. at 1800 r.p.m., has a piston displacement of 441 cubic inches and low speed torque capacity sufficient to turn a propeller of large blade area without resorting to reduction gears.

The high speed model of the new series is ideally adapted for high speed runabouts in shorter hulls. It develops in excess of 165 h.p. at 3000 r.p.m. With an over all length of only 56¼", it requires very little space, permitting a wide choice in arrangement and maximum accommodations.

The generous use of light alloys in the "150" series has reduced the weight far below all-cast-iron engines of similar size. Exceptional smoothness is provided by its huge patented counter-balanced crankshaft with 2¾" diameter crank pins and 3¼" diameter main bearings.

Model 150 retains the well-known features which have made the Model 202 so outstandingly successful.





The new Scripps F 4 (above), popular for auxiliary use. At right, the new "150" series Scripps model, 100 to 165 h.p.

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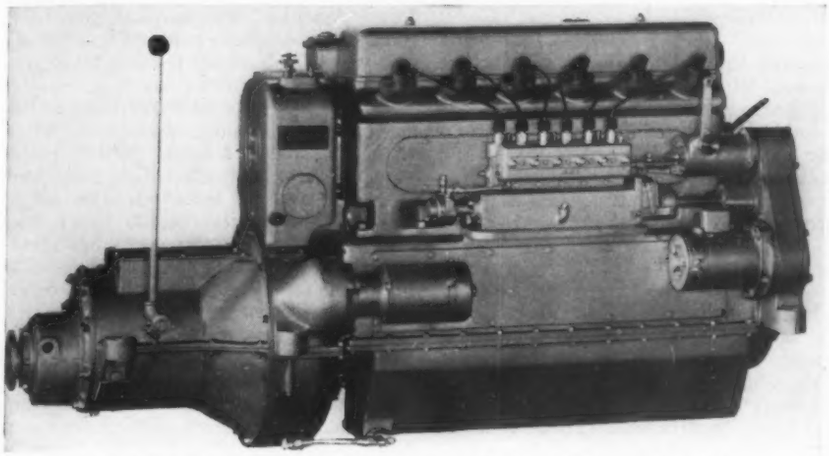
Red Wing Motors

RED WING Thorobred Motors, manufactured by the Red Wing Motor Co., of Red Wing, Minnesota, have been well and favorably known to the motor boat public for a number of years as reliable, powerful and efficient units for cruisers, runabout, work boats and auxiliaries. The entire Red Wing Thorobred line of 4-cycle motors, ranging in horse power from 4 to 150, will be shown at the Show in Block 420, fourth floor.

The familiar models remain much as in previous years, but with many small improvements in design and equipment. For instance, the little Model K 4–5 h.p. is now being made with a detachable cylinder head, which should make this popular fishing boat engine more popular than ever before.

And Red Wing will show a brand new model at the show. This is the 6-cylinder Courier, with bore of 3⅜" and stroke of 4⅛" normal speeds up to 2000 r.p.m., and intermittent speeds up to 3000 r.p.m. This is a rugged power plant for fast runabouts and fast cruisers, and will be made with both iron base and aluminum base. This high speed power plant is compact, rugged and lasting with all the latest and best engineering features, such as Ricardo type cylinder heads, full pressure feed lubrication, built-in oil cooler and filter, bronze rotary water pump, etc. If desired, built-in 2 to 1 reduction gear will be furnished.



The Hill-Diesel 6-cylinder marine motor, 3½" by 6" bore and stroke

Hill-Diesels

WITH the ever-increasing popularity of Diesel motors for yachts and vessels of all sizes and types, the exhibit of the Hill-Diesel Engine Co., of Lansing, Michigan, is sure to attract the attention of those showgoers interested in the latest models of this quiet, powerful, compact motor. Included in the show exhibit will be the 4-cylinder model, with 3½" bore and 6" stroke, direct-connected to a 10 k.w. generator. A 15 k.w. generator may also be connected to this unit, while a 6-cylinder engine of the same type is furnished to run either a 20 k.w. or 25 k.w. generator.

Other Hill models to be shown are the 4-cylinder 3½" x 6" marine engine, and the 6-cylinder unit of the same bore and stroke. Then there will also be the 6-cylinder 5" x 7" engine, the same unit being furnished also in single cylinder, 2-cylinder, 3-cylinder and 4-cylinder sizes. Factory experts, as well as men from the New York office, will be on hand to answer any and all questions.

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A New Type, High Speed 100 H.P. Winton-Diesel

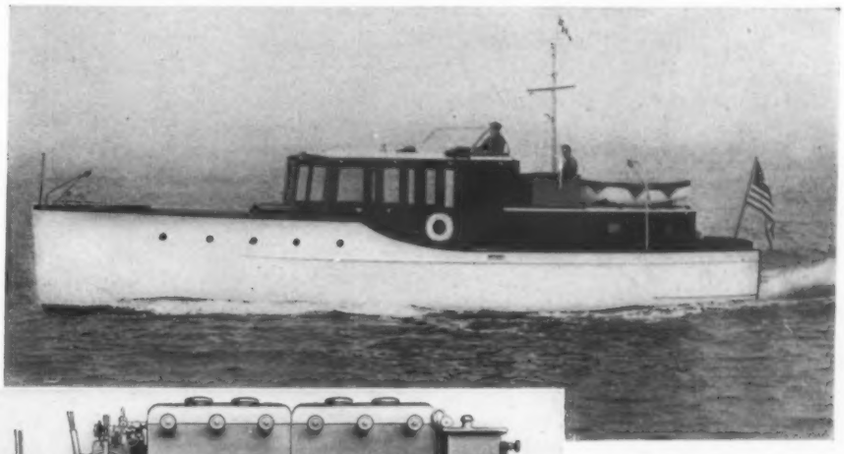
AN INTERESTING engine at the National Motor Boat Show will be a new type, high speed, 100 h.p. Winton-Diesel which exemplifies the advances effected by Winton in designing and building a suitable high-class Diesel for the smaller pleasure craft. Several new boats between 40 and 75 feet in length now under construction will be powered with this new unit, which is known as Winton Model 182-6, and indications are that the 1932 season will see a decided increase in the number of Diesel boats of a size for which, in the past, only gasoline engines could be considered. This new Winton is said to be as smooth, clean, and quiet as a high-class gasoline engine, and, in addition, provides the Diesel advantages of greatly reduced operating cost and increased cruising range. In short, this new engine now makes available for smaller boats the satisfactory performance and economy that has placed Winton-Diesel engines in many of the larger and finer American-built yachts, cruisers, and houseboats.

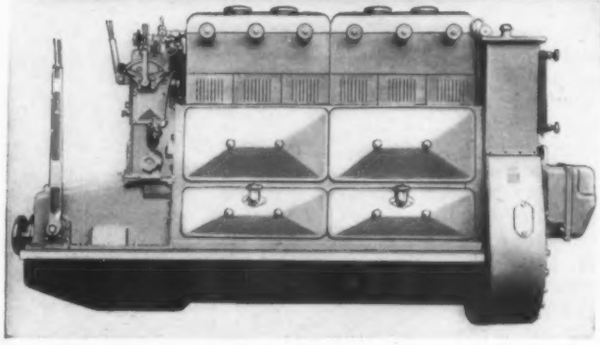
The design of the new Diesel is simple and compact. A marked reduction in weight and size has been effected, the result being a lightweight Diesel of remarkably advanced design. The unit is a 6-cylinder, 4-cycle, high speed, airless injection marine Diesel engine, with 5" bore, 7" stroke, developing 100 h.p. at 1000 r.p.m. The engine is completely enclosed and self-contained, with necessary water and lubricating pumps, thrust bearing of ample size, planetary type reverse gear, and fly-ball type governor.

While the engine is light in weight, it is of unusually rugged construction. It is clean, instantly responsive to the operator's demands, and easy to operate. The over all dimensions are as follows: Length, 7' 7"; width, 2' 4"; height, 4' 3½"; distance, center line of crankshaft to bottom of base, 9"; distance, center line of crankshaft to bottom of flywheel housing, 1' ½". The engine is electrically started, and has force-feed lubrication throughout. The thrust bearing is extra heavy, of ample size to absorb all thrust exerted by the propeller wheel, and is integral with reverse gear housing and bottom half crankcase.

The planetary type oversize reverse gear of latest design is rigidly held in alignment by extension of engine base. The gear is ball-bearing equipped; drives on clutches only — not through locked gear teeth — and automatically centralizes on the crankshaft, giving perfect balance regardless of speed.

Of special interest to those who are contemplating the purchase of stock boats is the 50-foot Wheeler Playmate stock cruiser which will be powered with this new Winton-Diesel. In this cruiser, which will be displayed at the Show, everything that is necessary for boats of this type is being included in the equipment, and, above all, practical lines and exceptionally staunch construction are being used. Fuel tanks of 400-gallon total capacity are being installed and the fresh water capacity is 200 gallons. The Winton-Diesel main engine will provide a speed estimated at 12½ miles per hour and a cruising radius of approximately 625 miles. A number of boats now building will be powered with this new engine.





The 48-foot Diesel cruiser "Walfrid" (above) powered with the new 100 h.p. lightweight Winton-Diesel motor, and (at left) the motor itself

New Sterling Models

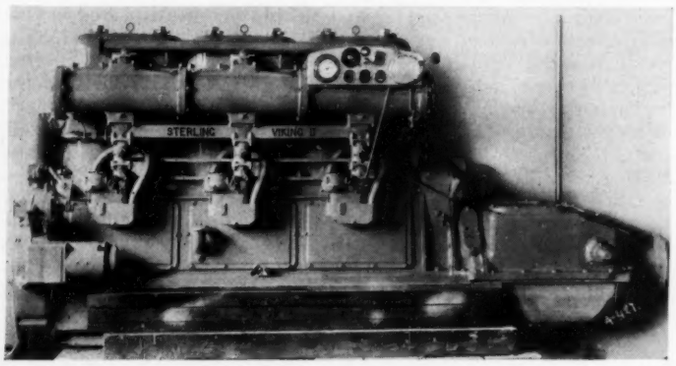
AT THE twenty-seventh annual Motor Boat Show, in its usual artistic setting, the Sterling Engine Company will exhibit a new 1932 Petrel. This 6-cylinder, 5¼" bore 6" stroke engine, delivers 200 h.p. at 2000 r.p.m. There is also a special runabout engine, rated 225 h.p. at 2150 revolutions. Although this model has been on the market for four years, it has been steadily improved and is now offered with 779.3 cubic inches piston displacement and all the power and speed possible in an engine of this approximate size.

The Sterling Dolphin, 6- and 8-cylinder engines will be also displayed. Two models of the 6-cylinder engine are to be seen, the 225 h.p., 1550 r.p.m., and the high-speed Dolphin Special "6," 300 h.p. at 2000 r.p.m. This latter is the most powerful rating given a motor of this cylinder size, 5¾" by 6¼". An 8-cylinder model, rating 300 h.p. at 1550 revolutions, is also being shown. These models have the usual Sterling characteristics — counter-weighted crankshafts, oil coolers and filters, rolled steel forged fly wheels, and double carburetors. All the Sterling carburetors are fitted with integral drip pans and back-fire flame arrestors.

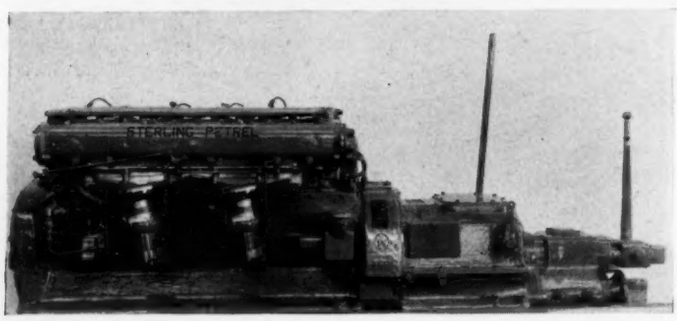
Still another interesting model is the 6-cylinder U. S. Coast Guard, 225 h.p. at 1200 r.p.m. These engines have become increasingly popular in yachts, and several new boats will appear in 1932 equipped with these models.

Among the other Sterling engines to be exhibited, are the Viking II, 6- and 8-cylinder models, which have proved themselves very successful in a number of large yachts, fireboats and government vessels.

All the Sterling engines exhibited represent the most modern engineering practice, to which has been applied the practical features that make these motors desirable for yachts. None of the engines have required any internal changes for a number of years, and in this period only minor accessory features have been added.

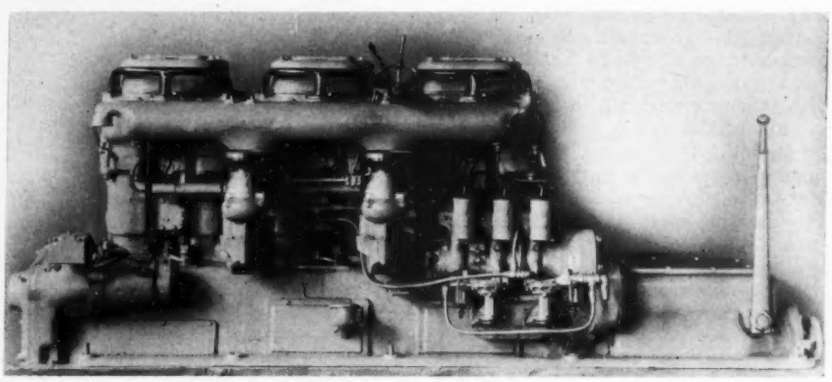


The Sterling Viking model, 6-cylinder motor, 425 h.p. at 1200 r.p.m.



(Below) Sterling Petrel reduction gear motor, 180 h.p. at 1800 r.p.m.

The Dolphin Special model, 300 h.p.



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Lycoming Motors

THE exhibit of the Lycoming Manufacturing Company at the Show will consist of four motors from 45 h.p. up to 325 h.p. and from 4 to 12 cylinders. These motors are practically the same as the 1931 line but with a number of mechanical changes and improvements.

Lycoming will present their new model UAB engine, a successor to the well-known Model UA. Basically, it is the same engine with 1932 refinements. The horsepower of the new model has been increased from 40 to 45. The 12-volt single unit starter-generator has been discontinued and is now replaced with a 6-volt 2-unit Auto-Lite system. The generator is driven by a "Vee" belt and is mounted on a swivel bolt which permits taking up slack in the belt.

A new all-bronze oil cooler bolts to the side of the cylinder block and, when removed, exposes a large opening in the water jacket, through which sand and sediment can be removed. The oil is passed through the cooler tubes and the motor cooling-water surrounds them. Ignition is supplied by 6-volt Auto-Lite high tension distributor with full automatic spark advance.

The lubricating system is by force feed, with a gear pump submerged in the oil sump, and a regulating valve permits adjustment of the oil pressure. All internal oil leads are rifle drilled, eliminating tubes and union connections that are liable to shake loose or break.

An improved type of Joe's reverse gear, especially designed for this engine, is installed.

Not only is this model an improvement over the old one, but a sweeping reduction has been made in the price, and the builders are offering greater value than ever before in the small engine field.

The exhibit will be in charge of C. F. Loew, who will be assisted by a staff of engineers and executives of the Lycoming factory.

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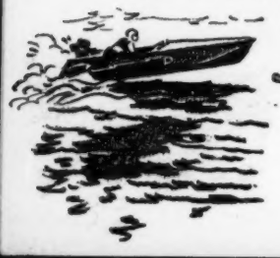
Van Blerck Opposed Motors

THE Van Blerck Marine Engine Corporation will present at the Show two entirely different marine motors of the horizontally opposed cylinder type, which design results in a compact motor tending to eliminate vibration. Included in the Van Blerck exhibit will be an outboard drive designed by Joseph Van Blerck whose many years of marine engine designing insure the reliability of this product and of the new motors as well.

The Midshipman inboard motor, with its opposed cylinder construction, permits of unusual compactness, resulting in a small 4-cylinder light-weight motor of 150 lbs. delivering 15 to 30 h.p. at 2000 to 4500 r.p.m. Its small dimensions make it especially desirable in situations where space is limited, particularly height.

The Ensign model is a 4-cylinder, 4-cycle opposed type of outboard motor of the same construction and measurements as the power head of the inboard motor.



The engine is mounted in the conventional brackets and tilting arrangement used in outboard motors. Full electric starting is supplied and many other features which will make it worth the while of the showgoer to investigate and see for himself at the Show.

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The Hall-Scott Line for 1932

THE Hall-Scott Motor Car Company of Berkeley, Cal., will continue the same models as in 1931 with some additions to the Invader type which has proved so successful in the past year. All Hall-Scott engines are of the overhead camshaft and valve type.

The Fisher Jr. is a 60–70 h.p., 4-cylinder 4¼″ x 5½″ bore and stroke, 312 cu. inch displacement reduction gear engine. This engine is furnished with the option of 2 : 1 or 3 : 1 reduction in right hand rotation only, with a corresponding propeller r.p.m. of 900 or 600. This model has been used extensively in cruisers, fishing boats, purse seine boats, tugs and barges, where economy and dependability are required.

The Navigator II is a 100 h.p. 6-cylinder 4¼″ x 5½″ bore and stroke, 468 cu. inch displacement reduction gear engine. This engine is furnished with the option of 2 : 1, 5 : 1 or 7 : 1 reduction in right hand or left hand rotation with corresponding propeller speeds of 900, 600, 360 or 257 r.p.m. This model is also built in perfect pairs for dual installation with the exhaust manifolds on the starboard and port sides respectively.

The Explorer, a 175–190 h.p., 6-cylinder 5″ x 7″ bore and stroke, 824.7 cu. inch displacement reduction gear engine is made in perfect pairs for dual installation with the option of 2 : 1, 3 : 1, 5 : 1, or 7 : 1 reduction at propeller speeds of 900, 600, 360, or 257 r.p.m.

The Invader 275 h.p. direct drive model runs at 2100 r.p.m. with 6 cylinders of 5½″ x 7″ bore and stroke having 998 cu. in. displacement. This engine is used extensively in commuter-express cruiser, water taxi, and Coast Guard service, and is also built in exact pairs for dual installation.

The Invader, a 180 h.p. engine operating at 1500 r.p.m., differs from the Invader 275 in that it is made for slower speed service.

Johnson Outboards

WITH new improvements and further refinements in both the Johnson Sea-Horse and the Johnson Standard lines, and with a new and lower price range the Johnson Motor Company will display at the Show much that will be of interest to outboarders.

The Sea-Horse line for 1932 will consist of six motors ranging from the 1½ h.p. Sea-Horse Single, the world's lightest outboard motor, to the 4-cylinder Sea-Horse 32, with its more than 30 horsepower. The Standard line, which was introduced by Johnson during the past season, will feature a light twin and a standard twin model, each revealing further refinements in design and appearance.

Of special interest to racing enthusiasts is the announcement that for the coming year Johnson will feature only three models of racing motors, concentrating on motors for Classes A, B, and C.

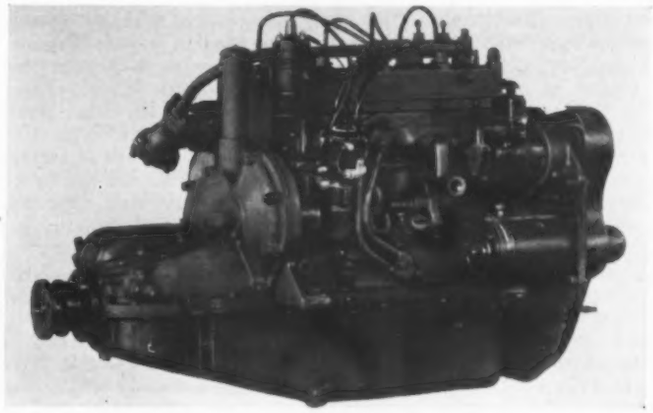
The price range which will prevail in the new line makes Johnson motoring cost less than ever before. The Standard Light Twin motor will be available at $97.50, the low price in the range, whereas $280.00 is the top for the Sea-Horse 32. Electric starting and ignition may also be installed on the larger models at an additional cost of $55.00.

The Sea-Horse Single, smallest model in the Sea-Horse line, weighs only 27 pounds, yet it develops 1½ horsepower and is capable of driving the average fishing boat or pleasure boat at moderate speed. Its price is $115.00.

The Sea-Horse 4, the smooth, alternate firing, light-weight twin-cylinder motor will be continued with some added improvements which make it even more powerful and smooth running. It is light in weight, has full pivot steering, underwater exhaust, rotary valve intake and pressure vacuum cooling system. The price of this unit has been reduced to $145.00.

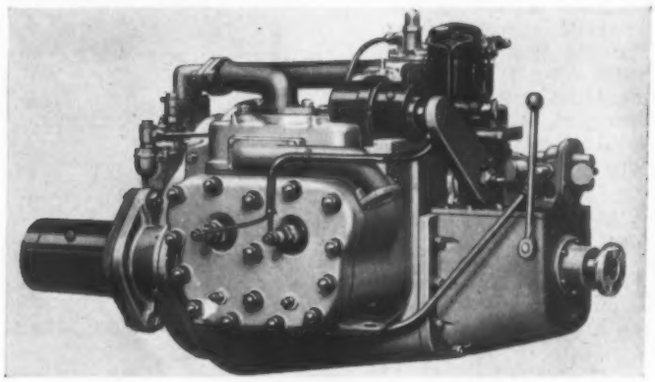
The Sea-Horse 12, larger companion of the Sea-Horse 4, has also been improved in detail to make it still more powerful and smooth running. It has all of the features of the small motor and is selling now at a new low price of $165.00.

The Sea-Horse 16, which for a number of years has

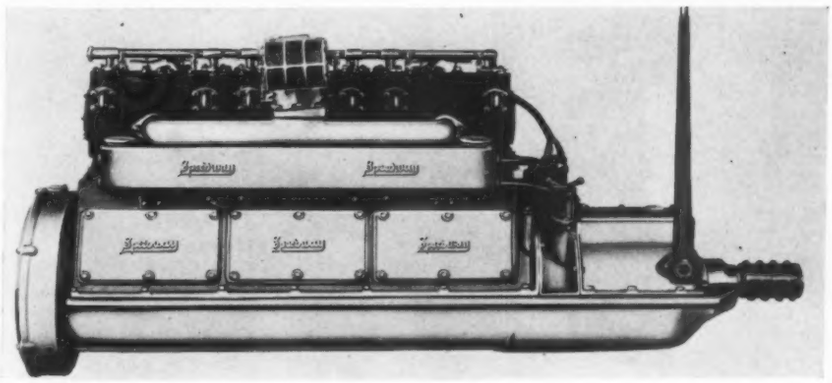


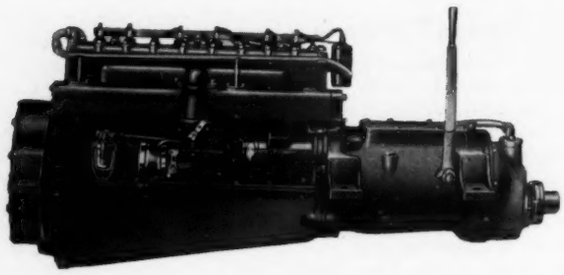
The Lycoming U. A. B. model, 45 h.p.

(Below) A 4-cycle opposed type motor by Van Blerck for inside installation, called the Midshipman



One of the Speedway models by Consolidated that will make its initial appearance at the Show





One of the new Farr 6-cylinder, high speed motors with built-in Morse reduction gear. A compact, efficient design

been outstanding in Class B, will be continued with certain improvements which make this motor an unusual value at its price of $215.

The powerful Sea-Horse 24, an opposed twin-cylinder, Class C, 30 cubic inch motor, will be continued as well, with improvements which give it more power. Like other larger Sea-Horse models, the 24 has the release charger for easy starting, the rotary valve intake geared to the crankshaft, free tilting, directional propeller steering, underwater exhaust, pressure vacuum cooling system and other features. This motor, as now improved, is lower in price than ever before, selling for $245

The largest motor of the Sea-Horse line, the Model 32, is a 4-cylinder opposed motor with release charger, rotary valve, pressure vacuum cooling system, underwater exhaust. For those who desire a very powerful, smooth and quiet performance on larger boats, it is an exceptional power plant at its new low price of $280.

There are two models in the Johnson Standard line. The smaller motor, the Light Twin, which is priced at only $97.50, is a twin-cylinder opposed motor rated at 3 horsepower with the usual Johnson features. The Standard Twin is a larger motor of very similar construction, a powerful three-port, two-cylinder opposed motor, rated at 8 horsepower.

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New Lathrop Motors

IN ADDITION to five familiar models, the Lathrop Engine Co., of Mystic, Conn., will show two newcomers. The first will be Model LH-4, a 4-cylinder motor with bore of 3½" and stroke of 4", which develops 16 h.p. at 1000 r.p.m. and 46 h.p. at 3000 r.p.m. The second is Model LH-6, a 6-cylinder motor of 3¾" bore and 4½" stroke, developing 27 h.p. at 1000 r.p.m. and 73 h.p. at 3000 r.p.m. Both have full force feed lubrication and full equipment, the LH-4 being priced at $385, and the LH-6 at $665.

Other models which will be shown include a single-cylinder, 2-cycle Type 6; 40 h.p. Standard model, 4-cylinder; 65 h.p. 6-cylinder Standard Model; Type 100 Mystic model, fitted with either up or down draft carburetor, and Type 150 Mystic model, with either type of carburetor. Both of the latter models are fitted with a new fuel pump which does not require priming.

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Kermath's 1932 Offerings

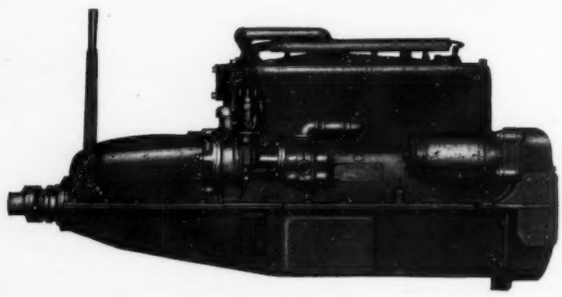
KERMATH MANUFACTURING COMPANY'S bid for fame in 1932 rests on the foundation of two outstanding contributions to the marine engine field — the luxurious new Kermath 12-cylinder, 450 h.p. 1414 cubic inch "Sea-Raider" and the powerful, rugged line of Farr Marine Motors consisting of a series of 4- and 6-cylinder engines in both high and medium-duty speed ranges. These two types of marine engines, standing at extreme opposite ends of the scale as regards luxury and price, assure the Kermath Company of continued favor by the boating public.

First introduced in 1931, as a custom-built engine, the 12-cylinder V-type "Sea-Raider" was taken off the custom bench in 1931, placed into production and is now offered the public for 1932.

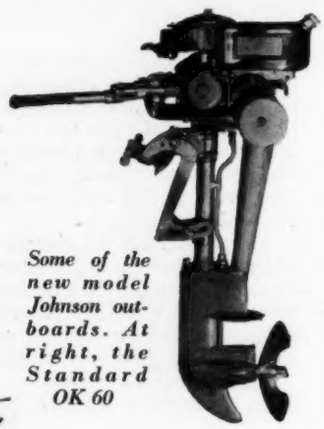
The "Sea-Raider" is distinguished in many ways. All materials in it are of the highest order, tested and tried in a thorough manner. The two Navy type carburetors alone cost almost as much as a well-known make of automobile. The 12 cylinders are of special chrome nickel gray iron with overhead valve action, are cast six *en bloc* and mounted at an inclined angle of 60 degrees, the bore being 5 inches and stroke 6 inches. The total weight is 2100 pounds and it produces 450 h.p. at 2200 r.p.m. The length of the "Sea-Raider" is 74 3/16 inches, height above crankshaft center 27 inches and width over all 42½ inches. What makes this engine of paramount importance to yachtsmen who own *de luxe* custom craft is the fact that it is extremely light for its horsepower and is one of the most compact, durable and smooth running marine engines in the market.

The Kermath line of motors for 1932 comprises seven 6-cylinder high-speed and medium-duty engines and several smaller engines which serve to excellent advantage in almost every capacity as auxiliary power in schooners, yachts and cruisers, as well as for regular heavy-duty workboat and fishing smack uses. Among these engines, two notably rugged models stand out, the 150–200 h.p. "Sea-Farer" and the 225 h.p. "Sea-Wolf."

In August, 1931, the Kermath Manufacturing Company launched a new series of high quality, low-priced marine engines — the Farr Marine Motors. These motors, bearing the name of the head of the Kermath Company, include eight different models — six 6-cylinder and two 4-cylinder designs for both medium-duty



One of the new models exhibited by the Lathrop Engine Co.



Some of the new model Johnson outboards. At right, the Standard OK 60

The new Sea-Horse "4" (center), and the electric starting Sea-Horse "24"

and high-speed uses, with power ranging from 25 through 95 h.p. Each engine in this series is also available with two types of built-in reduction gears for cruiser and workboat use.

Factors of the Farr motors which make them valuable to 1932 boat owners are their low price, exceptional power and economy of operation, efficiency, ruggedness and compactness, and the fact that they are available in both medium-duty and high-speed engines for every possible use. Another point of extreme importance is that each of these eight Farr engines are available with a variety of motor arms to fit the hulls of nearly every kind of boat made so that they can be used as replacement motors with the minimum of installation expense.

The medium-duty 6-cylinder Farr engines are designated as the Six-"60," the Six-"70" and the Six-"80" while the complementary high-speed engines which are similar in size to the corresponding medium-duty engines except for speed are known as the Six-"82," the Six-"92" and the Six-"102."

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Universal Motors

THE Universal Motor Co., of Oshkosh, Wisconsin, will show their complete line of marine motors, including single-cylinder, 4-cylinder, 6-cylinder and 8-cylinder models, in both runabout and cruiser types, with and without reduction gears. Included in this comprehensive display of these well-known marine power plants will be no less than five models which have not been shown before, and a complete line of their well known marine type electric plants, ranging in size from 1 k.w. up to 20 k.w.

Among the newcomers is a brand new Flexifour of 25 h.p., bore 3" and stroke 3½", with three-bearing, counterweighted, dynamically-balanced crankshaft, with about 90 per cent of the parts interchangeable with the Blue Jacket models. This is a decided improvement over previous Flexifours, and yet sells at a lower price.

Then there will be a new 4-cylinder Blue Jacket model, with down-draft carburetion, for the 125 cu. in. class, to develop well over 50 h.p. Alongside it will be a new 6-cylinder Blue Jacket, made in both cruiser and runabout models. The runabout model will develop 75 h.p. and weigh 475 pounds, and sell at a popular price. The cruiser model will be priced at an unusually low figure.

Then there will be a new Model 260, a 6-cylinder cruiser motor of 260 cu. in. cylinder displacement, which will embody many unique and interesting features, such as an oil screen which may be removed and cleaned in less than five minutes. An 8-cylinder model, with same bore and stroke, will also be shown, as well as a new and unique "Vee" Drive.

The Cooper-Bessemer Marine Diesel motor; 6-cylinder, 150-200 h.p.; 8-cylinder, 200-275 h.p.

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Cooper-Bessemer Diesels

THE new models of the well-known Cooper-Bessemer Diesel engines, one of which will be on display at the Show, will incorporate many important changes, resulting in greatly improved operation. A new fuel injection system makes it impossible for fuel oil to leak into the cylinders, as nozzle pressure is relieved to atmospheric pressure except at the moment of injection. Possibility of a shutdown is practically eliminated by providing duplicate built-in pumps. Valves are made of a special material ensuring long, trouble-free service, and greater strength and less weight are the result of using semi-steel for all major castings.

Cooper-Bessemer Diesels are made in 3-, 4-, 6- and 8-cylinder models, and range from 35 to 1500 h.p. All 6- and 8-cylinder models are direct reversible, while the 3- and 4-cylinder motors are fitted with marine reverse gears.

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Debevoise Marine Paints for All Uses

AMONG the new marine paints featured by the Debevoise Company at this year's show is a new Antilles Green Deck Paint. This is a very attractive new shade, particularly soft to the eye so that no sun glare results, as from other shades. As its name implies, it is made especially for decks, cabin and house tops, deck heads and ceilings. Another product being featured is the Debevoise Copper Bronze Bottom Paint. This comes ready for use, and is of a rich bronze color which has proved highly successful as an anti-fouling paint and gives the very hard, smooth racing finish so much desired by speed boat owners.

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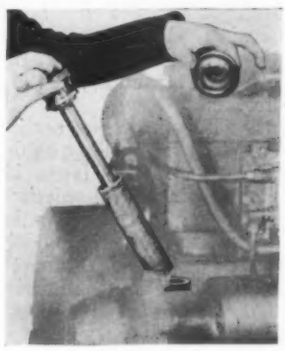
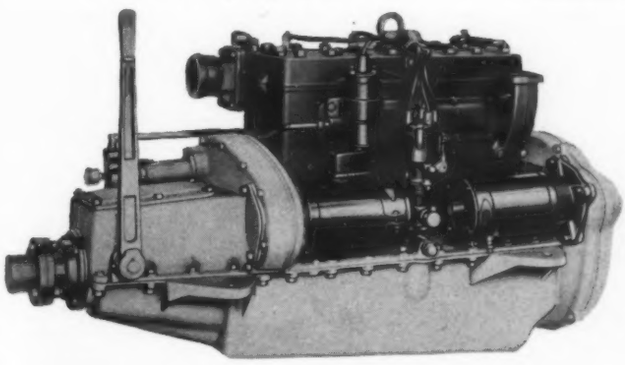
New Evinrudes and Eltos

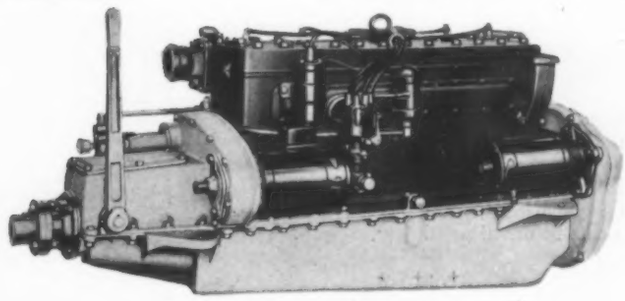
DETAILS of the new line for 1932 of the Outboard Motors Corp. are not available before the Show, but it can be stated that no less than three entirely new Evinrude and Elto models will be on display, featuring many engineering refinements. One of these new models will be priced under $90. A full account of this exhibit will appear next month.



The new Blue Jacket "Six," 75 h.p. at 4000 revs. Center, removable oil screen on new Universals

The Universal new Flexifour "25" model — a compact power plant





One of the new model Chris-Craft runabouts is a 27-footer which will be exhibited at the Show

Exide Floating Battery System on Display

OF UNUSUAL interest to owners of both large and small yachts will be the working exhibit of the Exide Marine Floating Battery System at the Motor Boat Show.

This exhibit will be found on the third floor, in booth 2, of The Electric Storage Battery Company. It will show graphically just how the Exide Floating Battery System works, and it will demonstrate the many desirable operating conveniences and economies which it has made practical aboard not only yachts of every size and description, but on commercial vessels as well.

A full line of Exide Marine and Exide-Ironclad Batteries will be on exhibition together with cut-away cells showing exactly how Exide Marine Batteries are made and why they give dependable service for so many years.

A highly informative and attractive new booklet entitled "Exide Marine Batteries for Pleasure Craft," has been prepared for distribution at the booth.

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Perko Enters Marine Hardware Field

THE Perkins Marine Lamp Company, well-known manufacturers of marine lamps is entering the marine hardware field and will present at the Show a full line of shaft logs, struts, binnacle heads, fixtures, and galvanized and bronze hardware, along with the Perko marine lamps.

This attractive exhibit will bear watching. You will want to see the new 1932 Perko fittings — items that have the modern touch and grace of line which will harmonize with the yachts of 1932. A new and handsome catalog will be distributed by Perko which will contain a wealth of interesting gadgets for the yachtsman and specification of fittings which will be of value to naval architects.

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Tiebout's New Line

KNOWN by yachtsmen for many years as one of the largest and most progressive firms in the marine hardware and accessory business, W. & J. Tiebout will show not only a fine line of true and tried fittings and "gadgets," but several new ones besides. First, there will be the Tiebout Safety Alcohol Stove, which has met with universal approval everywhere, several standardized boat builders having put in repeat orders this year. They are now marine distributors of the Kelvinator refrigerator, with models to take care of all requirements in the yachting field. In addition, they will handle not only the neat and compact Cunningham horn, but all sizes and types of Exide batteries, for runabouts, speed boats, auxiliaries, etc. Special pamphlets describing these newcomers will be distributed. In fact, when a yachtsman wants anything in the marine line — blocks, turnbuckles, rope, refrigerators, horns, snap hooks, stoves, anchors, or what not — it will be found here.

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Making Housekeeping Afloat Easier

THE question of how to make good housekeeping easier on board the modern cruiser will be answered at The International Nickel Company, Inc., displays, in booths 26 and 27, at the Motor Boat Show.

An entire built-in galley section of a cruiser of average size will be equipped in accordance with all the latest ideas of galley planning and construction, with special attention to the convenience of layout and equipment. The model at the Show will be fitted with Monel Metal cabinet tops, sinks, trim, and hardware, and will include some novel suggestions for refrigeration facilities.

Webbperfection Ranges

ELISHA WEBB & SON CO., of Philadelphia, will show several interesting Webbperfection Oil ranges, Monotile, a substitute for china clay tiling, and the Webbperfection Non-fouling Fly Staff.

Among the ranges will be a 5-foot Monel Oil Burning Range with chromium-plated trimmings, equipped with a Valjean carburetor. Another similar range will have a Ray Power Burner. In addition, there will be two types of Ray Power Burner — the Midget, or small burner, and the BG, or large, type.

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The Nautical Lamps Co.

WE ARE indeed pleased to announce the organization of The Nautical Lamps Company, of Plainville, Connecticut. This newly formed company has been established for the purpose of manufacturing, and supplying the trade with a complete line of marine and navigation lamps, lanterns, searchlights and kindred products. Headquarters, with plant equipment, is situated in the heart of "Brass Valley" and consequently, next door to principal sources of material supplies.

The personnel of the new organization is of long experience in the manufacture of nautical products and was formerly engaged in marine manufacturing. This fact assures the trade that nothing but correct and guaranteed legal equipment will be supplied.

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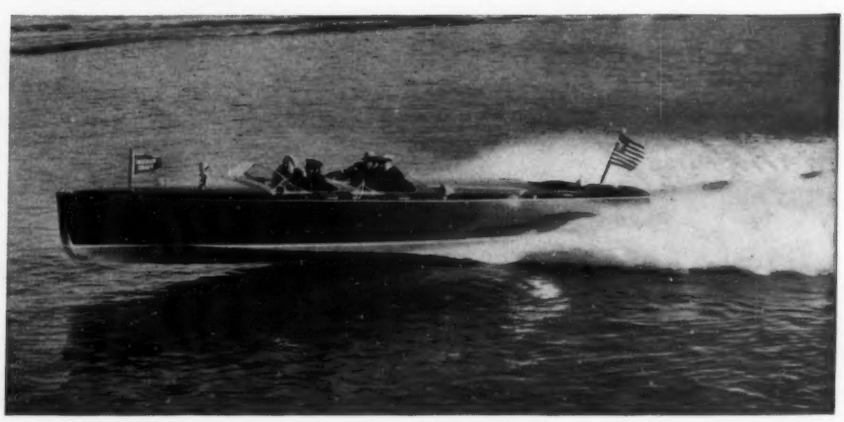
A New 32-Foot Hacker Custom Runabout

NOT exhibited at the Palace, but to be seen at the Bruns, Kimball showroom, New York, is one of the new luxurious 32-foot, 14-passenger Hackercraft Custom Runabouts which is John L. Hacker's contribution to boating progress for 1932. From stem to stern, this 14-passenger custom runabout is distinctly a family boat with three separate cockpits, two forward and one aft. Coupled with quiet refinement is a hull contour that give the effect of extreme luxuriousness. The planking is double on sides and bottom, of genuine Honduras mahogany. A 12-cylinder Kermath "Sea Raider" steps her along at 55 m.p.h.

(*Continued on page 166*)



A new Hacker model, the 32-footer, with three cockpits. A Kermath "Sea Raider" steps her along at 55 m.p.h.

YACHT INTERIORS. In addition to the decoration of fine homes and offices the Vernay Galleries are equipped to handle the decoration of Yacht Interiors in all its phases, while the extensive Vernay Collection of Old English Furniture offers an unusual opportunity for the selection of individual pieces suitable for land or sea.

An extremely fine Chippendale mahogany double-sided Pedestal Desk, made in one piece and decorated with carvings of unusual beauty and quality. 1760-1765. Height 2' 8", length 4' 5", depth 2' 11"

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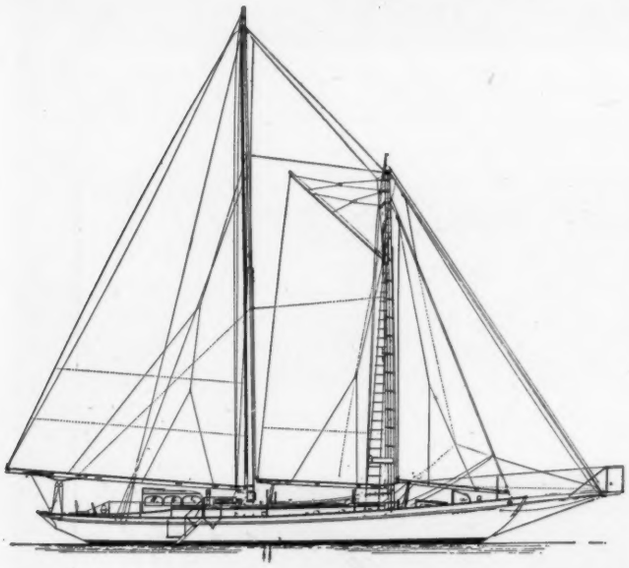

Shoal Draft Schooner

Shown above is a new schooner from our design now building for a prominent Chicago yachtsman. She is of the modern shoal draft type, measuring 66′ 6″ overall x 52′ 9″ waterline x 17′ beam x 4′ 6″ draft. With 6 tons of outside ballast, she is non-capsizable.

Below decks, entered from the deck shelter, will be a large main cabin with two emergency berths, forward of this a double and a single stateroom, two toilets, large galley, captain's room, and forecastle.

The deck shelter is most attractive. It appeals to the ladies particularly as a place thoroughly protected against bad weather but affording perfect vision. Others besides the ladies will appreciate its comfortable lounges, chart table, and the possibility of sleeping there on hot nights.

The modern shoal draft type has many advantages, one of which is greater speed under power. By using a 100 h.p. Buda motor with reduction gear, this yacht will have a speed better than 10 m.p.h. under power alone. Her design will also give the characteristics of good sailing qualities, ease and ability in a seaway, and comfort below, found in all our schooners of this type.

May we give you more details as to the comforts found in this type of sailing yacht? You will be surprised at the present moderate building cost.

John G. Alden

Naval Architect *Yacht Broker*

148 State Street, Boston, Mass.

Streamlines vs. Speed

(Continued from page 45)

bow wave and produce excessive resistance. If the boat were hundreds of feet below the surface — so deep that any disturbance due to its motion would not reach the surface — we could then do more nearly as the airplane theory tells us we should do. In order to get true streamline flow around a boat on the water surface the bow must be reasonably fine to avoid creating high pressures which will produce big waves. In other words, a boat must be shaped like a boat and not like an airplane or a fish, because it does not move where the plane or the fish moves.

After looking at those old wind splitters last summer I hunted up some of the old drawings. Among them I found one of a ketch which was designed in 1902. Racing rules influence the proportions, the length and fullness of the overhangs, and the shape of the sections; but, rules aside, doesn't the 1902 ketch look almost modern? You might want to change a few minor details and you might criticize the sheer, or the hardness of the bilge amidships, or you might want to fill the hollow at the garboard, but those changes would be small. Undoubtedly she would have the shape of the lateral plane and the keel line changed a little as shown by the dashed lines. The straight keel would give her something to sit on when she was hauled out and the increased rake to the rudder post is more in line with modern thought, but with an up-to-date rig she could go out and do her bit with the rest of the cruisers today.

Contrast the ketch with a "speed launch" designed that same year. Note the sharpness of the bow and the stern carried out in a long tail to permit the water to close in behind her without any fuss. Odd as she looks, she does not begin to show the sharpness at the bow nor the needle-like lines of the boats I saw on the New England lake because she is not a "racer" but corresponded in purpose to the modern runabout. If the speed length coefficient is not over 1½, this boat will slip along without fuss and will require very little power; much less power than would be needed by the modern type to make that same speed. As she is 32 feet 6 inches in length on the water line, a speed length coefficient of 1½ limits her speed to about 8½ knots, or a little less than ten miles an hour. Even up to 11 knots she would not be impossible, but she would begin to squat or suck down at the stern. Squatting is caused by streamlining the under water form in such a way that the motion of the boat reduces the pressure on the bottom and the pressure of the atmosphere then forces the boat down into the water. It is much the same as if a very heavy load were placed in the stern.

One look at the buttock lines tells all about squatting. If the buttocks are rather rounded and rise up as they go aft, expect squatting when such a boat is driven faster than a speed length coefficient of 1½. It will grow more and more pronounced as the speed is increased. In order to prevent squatting, forget all about streamlines for the under body at the stern and get the buttocks to carry out straight and flat. The boat is bound to travel with the buttocks of the after body approximately level — or even a little deeper at the stern.

One of the weirdest illustrations of the effect of suction that I have ever witnessed is to be seen in the model testing basin at Washington. Sometimes the water in the basin becomes coated with a scum of grease, dust, dirt and other foreign matter. In order to break up the film, sink the dust and dirt and clean the surface, a big hollow metal sphere is pulled down the testing channel behind the towing carriage on the end of a rope. At rest, the ball floats lightly on the water, being immersed not more than one-fourth of its diameter. As the towing

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High speed — 165 h. p. at 3000 r. p. m. Medium speed — 100 h. p. at 1800 r. p. m.
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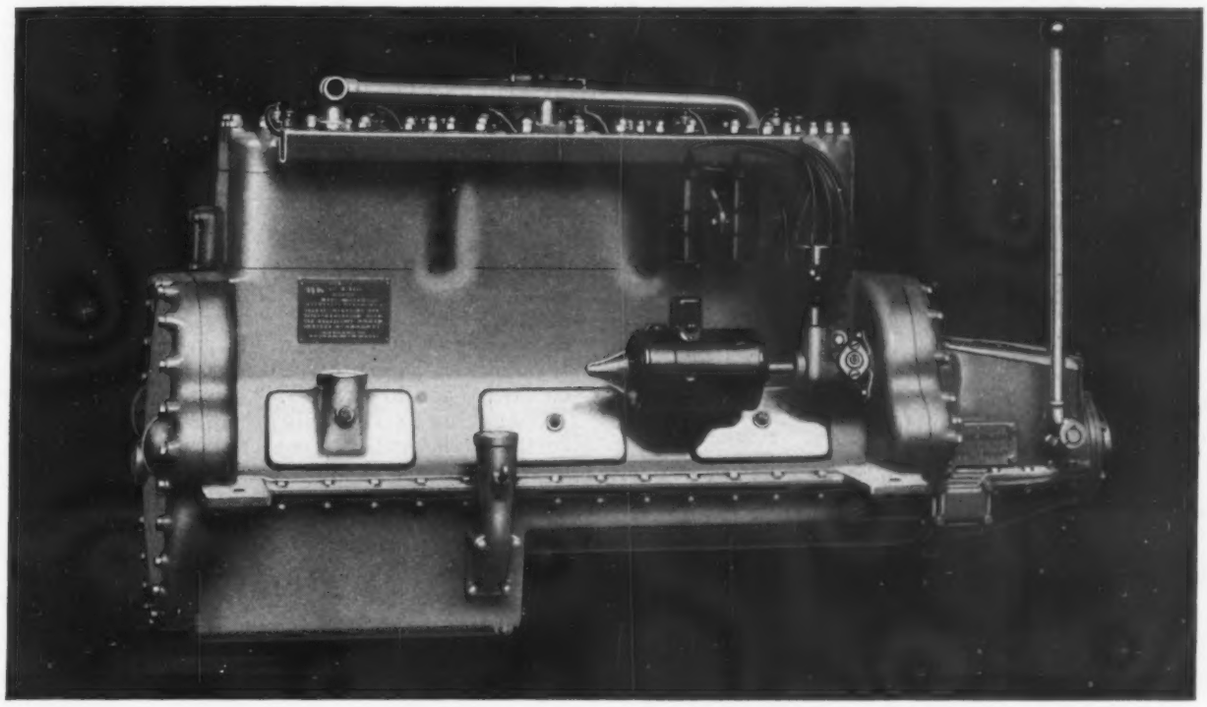

NEW

in Conception . . . Construction . . . Power

Advanced in design, masterly in construction, built in its entirety for marine purpose, this latest series by SCRIPPS reveals an extensive understanding of the exacting demands of marine engine operation and installation gained during 25 years of successful achievements. Made with timepiece precision, it combines unexcelled performance, smoothness of acceleration, abundance of power and light weight with compact dimensions and simplicity of assembly.

Every accessory is thoughtfully placed for convenience and accessibility. Previous conceptions of unnecessary weight and bulk are swept aside by a harmonious coordination of its main assembly and essential working parts. It is the only engine today which has the unique feature of combining true opposite construction and rotation by merely changing the assembly of its various parts, while maintaining identical firing order in both engines. Generous use of light alloys has reduced the weight of this sturdy motor far below that of all cast iron engines of like size built for some purpose other than marine use.

Because of its compact dimensions, the new SCRIPPS series 150 is especially recommended for craft of rakish lines such as the 22½ to 25 ft. smart custom runabout and for twin installations in cruisers and fast commuters of 30 to 45 ft. The medium speed series, in single or twins, gives an unsurpassed motive power to boats up to 50 ft.

We invite you to inspect it at the New York Motor Boat Show or to investigate the truly wonderful merits of SCRIPPS newest model which bears the SCRIPPS nameplate, a name that is never changed because it stands symbolic of integrity in manufacture and dependability in performance.

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SCRIPPS marine power plants 15 to 400 h. p. for high speed and medium speed in direct drive, provide adequate power for boats 15 to 90 feet and may be had from all standardized boat builders. Always insist on a SCRIPPS.

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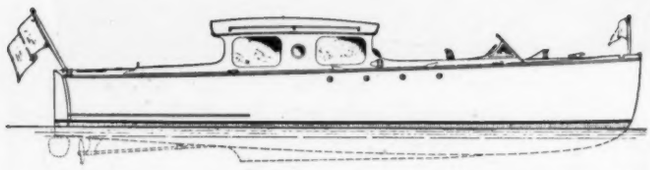
Geared to Individual Needs



The 32 foot SPORT BOAT $4950
AND UP

Here's a trim, compact and extremely useful Robinson Seagull custom design recently developed by this organization of master builders. It is a 32′ x 9′ 2″ Sport Boat—daringly original in design—having a modified V-bottom. It is an exceptionally dry type of craft—rugged and staunch, eager to show its stamina in any kind of weather.

A wide variety of arrangements are offered in the Sport Boat. Choice of custom designs in day cruiser, enclosed sedan, special shelter cabin runabout, yacht tender and sport fishing boat arrangements is offered. Mahogany and white oak construction throughout, with all fittings chromium plated and upholstering luxuriously appointed, are among the features to highly recommend it to the discerning yachtsman.

The price speaks for itself. Standard power is the 225 H. P. Kermath Sea-Wolf—offering driving speeds of 30-32 m. p. h. Write for the special folder on Robinson Custom Designs. All types of custom work solicited on cruisers, commuters, runabouts, yachts and sail yachts up to 90 feet in length.

ROBINSON Seagull CRUISERS

ROBINSON MARINE CONSTRUCTION CO.
Benton Harbor . . . . . Michigan

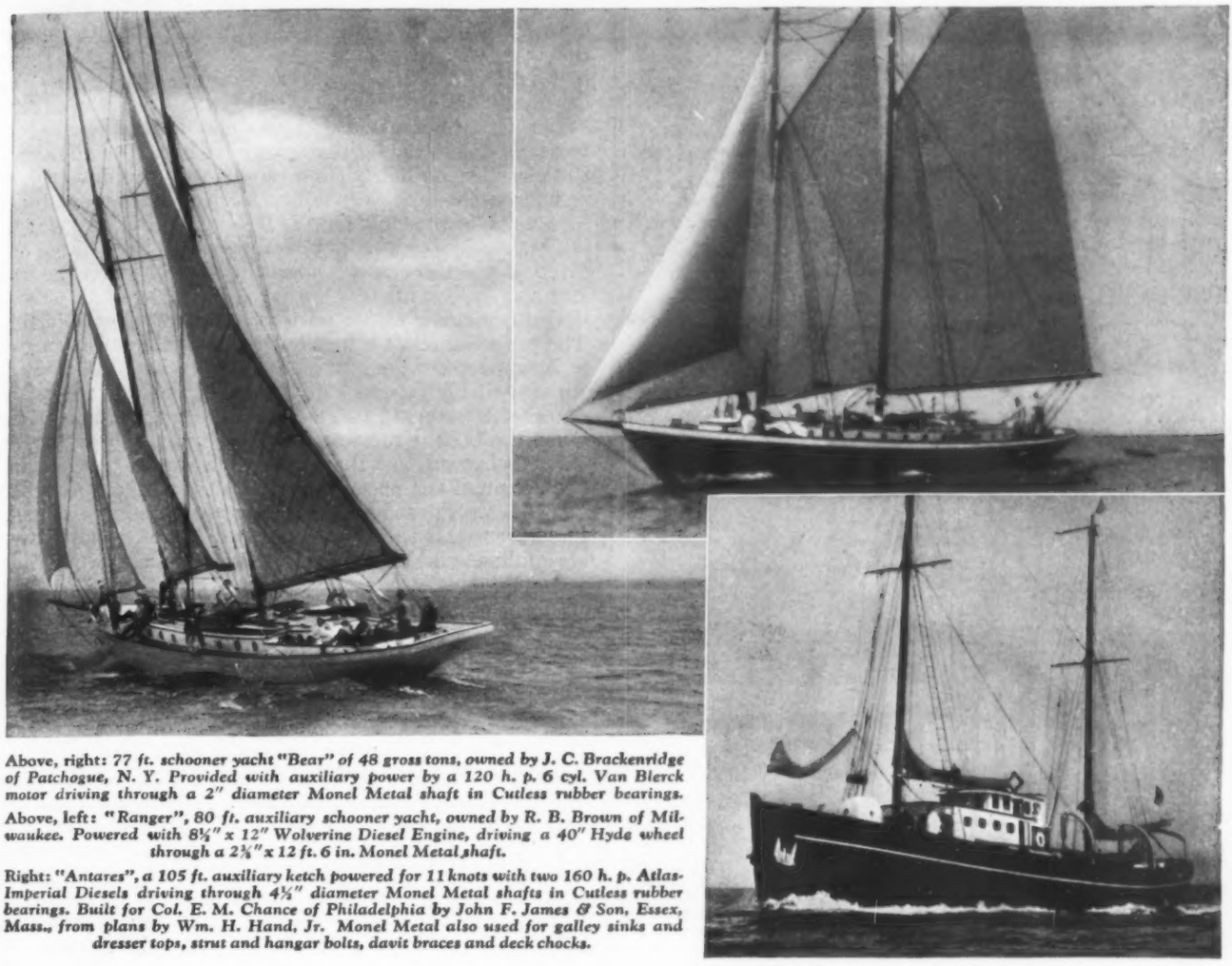
carriage is speeded up this ball, instead of skittering over the surface as one might expect it to do, is sucked down deeper and deeper and becomes more than half immersed. It throws up great sheets of spray and swings wildly from side to side as suctions and eddies are formed and broken. This is exactly what happens when the proud inventor tests the boat which he expects to roll over the water on great wheels or cylinders. Although the wheels can turn, the shape will create the same waves and suctions that are formed when they are held in a fixed position. No roller or wheeled boat has ever run successfully and it can be stated in all confidence that one never will.

Going back to the drawing of the "speed launch" to determine what to do to improve her performance as more and more power is installed, we find that the speed would be increased for the higher speed length coefficients if the long stern were chopped off. The water could then leave the bottom before any great drop in pressure occurred to push the stern down. Of course the center of buoyancy would go aft in comparison to the reduced length of the boat, and the speed length coefficient would increase. In general, that is exactly the proper thing to do to gain speed. When the speed length coefficient is small, the center of buoyancy can be ahead of the middle of the length to advantage, and as speeds are increased it should travel farther and farther aft. From looking at the lines of some of the latest sailing yachts I judge that the designers are taking advantage of this forward position of the center of buoyancy as being conducive to a form giving the least possible resistance.

Shown in the dashed lines on the profile of the "speed launch" is a profile on the same scale of a modern 26-foot runabout. Notice how the stern is chopped off and how the chine line slopes down the whole length of the boat from the stem to the transom so that some lift will be obtained even at the stern when the boat is driven at high speed. There is no vestige of any attempt to streamline the underbody. Everything is designed for lift and to try to ease the boat into a chop without pounding. The chine, or something else, is needed to break the water away from the side of the hull. If an attempt is made to run a boat with sections like those of the 1902 launch at the speeds required today, the water would cling to the sides and lift up in great sheets of spray eight or ten feet above the gunwale and the hull would be drawn down into the water bodily. It might even go entirely under the surface. Breaking the wave away from the side with a batten placed in the proper position will be a great help to a boat with round sections when it is driven at high speed. The suction is reduced, the boat rises bodily, and the wave is kept low.

When the speed length coefficient is above 4 or 5, then the concave Vee-bottom boat is most useful. Below that, the round form, if properly drawn and with properly shaped buttocks, is usually the better. Of course, it is understood that no general statement can be made which will cover all boats without any exceptions, for there is such an endless variety of shapes to be used that no one statement can tell the truth about all of them. The "Vee" design shown is that of a high speed runabout 34 feet long and is good for about 55 miles an hour with a 550 hp. motor. An interesting thing to note about this hull is that the lines of the port and starboard sides are different and have a different amount of lift. This is done in order to compensate for the torque of the high powered motor so she will remain on an even keel when running as well as when she is at rest. There is no semblance of a streamline anywhere in the bottom taken either in section transversely or longitudinally.

The last illustration, to show a boat of really high speed, are the lines of the famous Gold Cup boat *Rain-*



Above, right: *77 ft. schooner yacht "Bear" of 48 gross tons, owned by J. C. Brackenridge of Patchogue, N. Y. Provided with auxiliary power by a 120 h. p. 6 cyl. Van Blerck motor driving through a 2" diameter Monel Metal shaft in Cutless rubber bearings.*

Above, left: *"Ranger", 80 ft. auxiliary schooner yacht, owned by R. B. Brown of Milwaukee. Powered with 8½" x 12" Wolverine Diesel Engine, driving a 40" Hyde wheel through a 2⅞" x 12 ft. 6 in. Monel Metal shaft.*

Right: *"Antares", a 105 ft. auxiliary ketch powered for 11 knots with two 160 h. p. Atlas-Imperial Diesels driving through 4½" diameter Monel Metal shafts in Cutless rubber bearings. Built for Col. E. M. Chance of Philadelphia by John F. James & Son, Essex, Mass., from plans by Wm. H. Hand, Jr. Monel Metal also used for galley sinks and dresser tops, strut and hangar bolts, davit braces and deck chocks.*

More time on the water...less time on the ways...with MONEL METAL SHAFTS

● What's the fun of owning a boat that has to be frequently pulled out for repairs traceable to a "weak-kneed" propeller shaft? Inferior shafting can be a never-ending source of expense and annoyance. Sound, dependable shafting, made of Monel Metal, will save you money and add immeasurably to your pleasure and peace of mind. ● Monel Metal shafts never rust and their high resistance to salt water corrosion prevents pitting. They are strong, tough and rigid, with a uniform rolled structure that fortifies them against bending and breakage. Due to their glass-smooth texture and absolutely true surface, they polish to a mirror-like finish that practically eliminates friction and cuts vibration to a minimum. ● Monel Metal shafts are standard equipment on leading makes of cruisers and runabouts, and can be readily installed in all auxiliary sailing craft. Next time you have your boat hauled out, be sure to have her equipped with one of these long-wearing shafts.

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The slightly higher cost of Monel Metal is insignificant compared to what you will save on repairs and replacements. Make certain that your new boat is equipped with a Monel Metal shaft.

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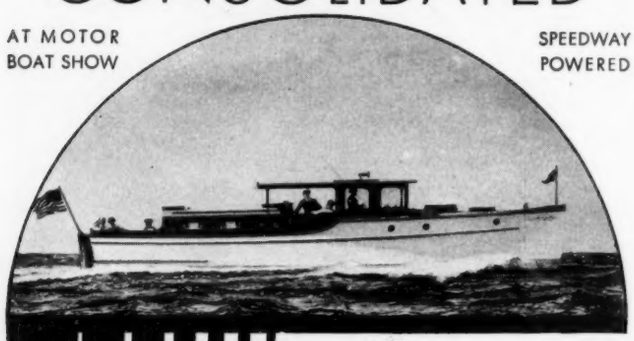
A COMFORTABLE NEW CRUISER

1932 DESIGN by

CONSOLIDATED

AT MOTOR BOAT SHOW

SPEEDWAY POWERED



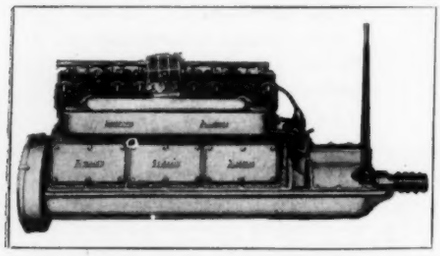
THE NEWEST achievement of Consolidated is a fast two-cabin cruiser a trim craft, staunch, seaworthy and graceful and rich in appointment.

- Length 47-ft.; beam 10-ft. 6-in.; draft 3-ft. 6-in.; double plank hull, copper fastened.
- *Forward cabin* has two transom berths, wardrobes, dresser and separate toilet room.
- *After cabin* has four berths, separate toilet room, wardrobes.

• • •

- Captain's room forward, also complete galley.
- Efficiently and economically powered with one 6-cylinder 180 H. P. Speedway Engine located underneath the bridge deck. Speed 20 miles per hour.
- *Inspect this splendid craft at the New York Motor Boat Show, Grand Central Palace, January 22nd to 30th, Space A-3, Main Floor.*

SPEEDWAY ENGINE, Model MP, 180-H.P. Smooth, quiet, dependable power in abundance... See Speedway Engine exhibit, Space 407, Fourth Floor.



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MORRIS HEIGHTS NEW YORK CITY

bow IV. *Rainbow IV* was the first of the "shingled" bottoms which have received so much publicity during the past two years on account of the success they have had in the Gold Cup races. *Rainbow*, however, was designed for her "shingles" and was built with them as her actual bottom. In a sense, she was a rule cheater, but before she was built we were told that we could lap the planking on her bottom in any way we pleased just as long as the laps were not to be deeper than one inch. She raced for the Gold Cup at Detroit in 1924 and won it, but was afterwards disqualified because she violated the intent of the rule. So it is a matter of record that she was fast and successful.

Quite as novel as her bottom is the way she is driven. The propeller shaft comes out through the lower part of a very narrow, dory-like transom. When the boat is running at high speed, only the lower part of the wheel enters the water. It acts as a true surface propeller. But when the boat is running slowly the water flows around the curving sides of the hull, which squats a little, and the action of the wheel is that of a submerged propeller. In other words, at low speed *Rainbow* acted as a streamlined form and then at high speed forgot all about her streamlines and became as different from it as possible.

An "Intrepid" Cruise

(*Continued from page 68*)

away 40 or 50 yards from the reef before it expired for good. The fortunate intervention of a few catspaws, each one taking us a little farther away, prevented us from drifting back on the reef. Dawn found us just abreast of Sanganeb Reef, all of 19 miles from Port Sudan! Here we stayed until noon, praying for a breeze. A stiff Southerly brought *Intrepid* to life and the next 22 hours put us 120 miles farther along.

But here our troubles began. The wind shifted from south to northwest, blowing constantly harder, until within two hours we had to take in our small jib. Two reefs in the main followed, and it was not long before the mainsail began to rip at the second reef cringle and we were forced to put in three. The seas were so steep and bad that we could make no headway with three reefs down, so we lowered the mainsail long enough to patch it and then got going again with two reefs. This strenuous beating continued through the three days following, during which time we had to lower and repair our sails six or seven times. On the 13th our staysail was badly ripped and we replaced it with a spare one.

For the past three days we had averaged only 20 miles a day, and from pilot charts and reliable information we were practically sure that we would have to buck these heavy seas for the remaining 500 miles. Our cruising time was rather limited, and rather than spend so much of it this way, we decided to return to Port Sudan and see what could be done about shipping the boat from there to Port Said. With the heavy wind and seas behind us, we made short work of the 200 miles, landing at Port Sudan early on the morning of the 15th. We arranged to ship the boat to Port Said on the steamer, S.S. *Japan*, which sailed early on the morning of the 17th. It was well that we did not attempt to finish sailing to Suez, as even the steamer was slowed up considerably by the heavy head winds and seas encountered every mile of the way.

By midnight of the 20th, *Intrepid* had been unloaded at Port Said and her mast stepped, and with the aid of a tow we dropped anchor just abreast of our old friend, *Shenandoah III*.

(*To be Concluded*)

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with

LEVEL RIDING

In the past two months hundreds of people —motor boat dealers and boating enthusiasts— have driven and ridden in the new Chris-Craft runabouts, and have experienced for the first time LEVEL RIDING. They pronounce it the greatest contribution to comfort and performance in the history of the industry.

LEVEL RIDING is not a mechanical feature with which boats can be equipped, but a *principle* that Chris-Craft's 45 years' experience has designed and built into them. *And only Chris-Craft has it.*

To realize for yourself its value to Chris-Craft owners, just "watch the way they ride." Compare them with any other motor boats afloat. Note their greater stability and smooth riding qualities—the added speed per horsepower—the *horizontal* range of vision at high speeds, not possible when bows rise at an awkward angle.

This 1932 fleet—with added beauty and many new equipment features—is offered in models to meet every need, priced as low as $795. Write for descriptive literature—and arrange through your nearest dealer to see the new Chris-Craft with LEVEL RIDING.

1932 Chris-Craft runabouts in action—15½; 18, 21, 25 and 27 ft. models, photographed on the Chris-Craft proving grounds at Algonac.

Watch the Way They Ride

Conventional Way

Chris-Craft Way

Chris-Craft

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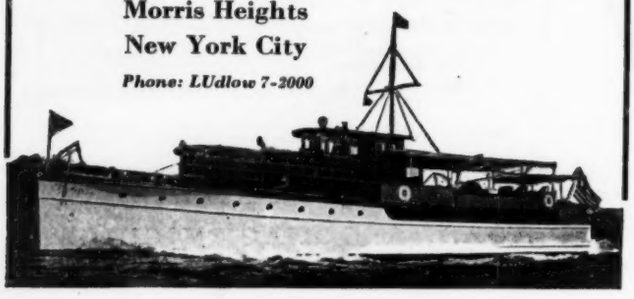

Some Fastnet Reflections

(Continued from page 70)

The more one sails in ocean races the more I find one's fixed ideas are apt to be shattered. This year the question of a boat's ability to heave to has given many of us food for reflection. *Maitenes*, from what I understand from one of her crew, hove to until the weather became really bad, when the rising wind and seas became too much for her. Her head paid off and her jib-headed trysail, which she had set when her mainsail commenced to go at the batten pockets, did not appear to be either the right shape, or to have enough area in the right place to bring her head up again. When off the wind the trysail drove her too fast for safety in that sea, but with the helm hard down she would not come up. Lieut. Luard had only one course left open to him, which was to lower his sails and run before it under bare poles. As he was over the Labadie Banks in a rising southwesterly gale, he had little room to spare if the gale continued, which, as it happened, it not only did, but increased in force, resulting in his having to accept assistance from a steam trawler, a timely alternative to driving on the Irish coast.

There is a vast difference between heaving to in a gale over the Labadie Banks, facing the full drift of the Atlantic, to heaving to in a hard wind to pick up a dinghy in sheltered waters, and I have little doubt that most schooners, ketches, and the old straight stem cutters would have hove to between the Fastnet and the Longships on the 16th. But one wonders whether, with a tall Bermudian mast on a boat with the modern profile, a trysail will allow the center of effort being far enough aft to drive the boat's head sufficiently into the wind. I once owned a 15-metre which would heave to in quite a fresh wind in sheltered waters, but I was disillusioned about her capabilities in this respect by some really heavy weather in the North Sea, where the short breaking seas on this occasion wiped her long overhanging snout off and left her wallowing on her side with the water forcing its way under the skylight covers. At this angle of heel her rudder was practically useless, and lowering the reefed staysail made no difference.

It is the experience of *Maitenes*, my own observations in the North Sea, and on another occasion in a Dutchman off the Lizard, and several hearsay adventures, that makes one wonder whether we really know what combination of sail is required to heave to a modern cutter with a cut-away forefoot and a high mast. I feel moderately certain that there were no yachts out for pleasure 'round the English coast on August 16th; I know of a few that were out on the 15th and their owners tell me they were glad enough to run in for shelter before the weather became worse. On this score I think it highly improbable that any of us are likely to put to sea in that sort of weather for the sake of experimenting with cutters, Bermudian or otherwise, to discover under what sail they will lie to, or under what sail they will not.

I felt moderately certain that *Neptune* would heave to off the Cornish Banks with a close-reefed mainsail, provided that way of from two to three knots was kept on her, as I hove her to like that before. But had the mainsail blown out, she would have hove to under a jib-headed boomless trysail, which in that wind would have been a mere bag forcing her to leeward with little or no forward drive.

It might be possible on a Bermudian to devise a long heavy slide, and a reënforced track at the point of contact, so that a gaff trysail could be sent up. This would mean special cheek sheaves and halliards for the peak which would be extra windage and very likely never required, but a gaff-headed sail with a short hoist, cut long in the foot, might give the required shape to drive

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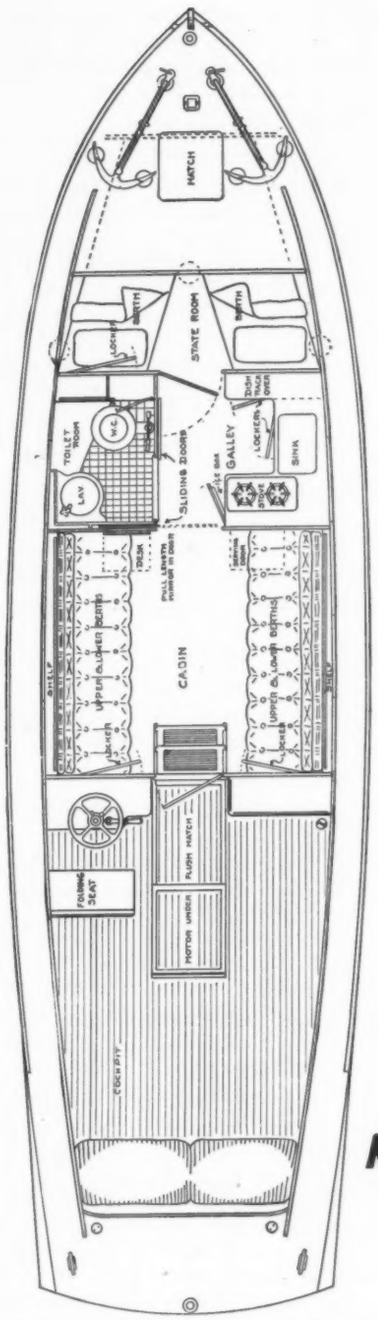

"DO I HAVE TO GO TO BED NOW, MUMMY?" She would rather stay up and play some more, but as soon as she hits one of those soft, springy beds in the forward stateroom of a Twin Stateroom Marblehead (see layout plan at left), it'll be the Land of Nod for her in a second. This stateroom has locker and hanging space, full headroom at the after end and two built-in berths 6 ft. 9 in. long. It's this Marblehead feature that set the yachting world ringing when it was introduced.

★

"HOW ABOUT SOME MORE FOR ME, JOAN?" After a cool, lovely day's run, what could be better than to sit down in the main cabin of a Marblehead and knock off a real man-sized meal? There's nothing like yachting to give you an appetite like a wolf. And see how comfortable it is in this cabin. Plenty of headroom. Plenty of seating room. And the little pantry makes serving easy.

★

AT HOME SHE'D BE SAYING, "PUT OUT THAT LIGHT." But afloat in a Marblehead she just relaxed in that luxurious berth and dropped off to sleep. Note how the desk and the serving shelf fold away when not in use. You'll find every inch of space has been put to good advantage aboard a Marblehead. Looking forward through the galley, you can see the forward stateroom door.

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Biddeford, Maine

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From the original Pen Drawing by George Gale of a whaleship hove down for repairs at New Bedford

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LUDERS MARINE CONSTRUCTION CO.

STAMFORD • • • CONNECTICUT

a high-masted cutter slowly ahead about five points off the wind in a gale.

That a schooner will lie to under a reefed foresail is no doubt due to the windage of her mainmast having its effect upon the position of the center of effort. It would be interesting to know the effect of lying to under a reefed foresail should a schooner lose her mainmast. If she would, it might throw some light on the problem of the comparative drive of boom and boomless sails.

"Gypsy," a 26-Footer

(Continued from page 82)

proper angle, measuring with ordinary square. Allow 1½ inches for hem. Cut one end of next strip; pin to first at reasonable intervals, 8 inches or so, and sew together before cutting other end. The ends will then match. My canvas shrank after coming off the bolt, and as I sewed it in spare moments, I was worried about its set, but nothing showed. I went to the bother of getting tarred bolt rope. When it rained the sail shrank and the rope did not, and when it was dry, the sail stretched, and the rope did not. Use well seasoned manila rope ¼", of the ordinary variety.

Mildew-Proofing

Mix 2½-oz. lead acetate, 4 oz. alum, 3 gals. water, scant. Wet both sides of sail with sponge or brush. Besides this, there should be a waterproof cover for the mainsail, and the jib should be taken in. Use snaps on forestay.

Canopy

This is made of light canvas, with four poles to spread it when up. Poles are 1¾" by 2". It all rolls up and goes below. Paint top thoroughly with linseed oil.

Air Tanks

I do not like a boat that will sink, so I made two air tanks 14" by 15" by 30". Make a rough box of these dimensions. Bend 28-gage galvanized non-rusting metal, such as your roofer uses, around the box. It comes 28 inches wide. Make the ends lap over this and nail all in place with galvanized nails. Solder up joints and over nail heads. As the pressure is in, not out, this form of tank is proper. They fit in under deck abaft the centerboard box. Check dimensions in your boat before making.

Ballast

Get 400 lbs. of window weights. The ballast is placed from about a foot abaft the mast nearly to the after end of the hatchway, about four feet. Lay burlap on the bottom. Cover with thin concrete. Lay iron in place, and fill in with thin concrete. Put wood strip between each group of weights crosswise of the boat, so that the ballast will be in chunks for removal, if necessary. The burlap holds the mass together and keeps it from sticking to the boat. The concrete keeps the iron from rusting and prevents the ballast from rolling around.

Costs

Watch your hardware bill. Every time you can devise some way of avoiding hardware, you save a lot of money. It is the total of little items that costs here. The following is the list of costs on the boat I built.

Lumber	$87.15
Hardware	57.95
Sundries	15.05
Paint	13.70
Spars	14.70
Sails	21.15
Gear	37.45
	$247.15

No more foreign sails for "Bacchant"

Judge Jesse W. Morton, owner of the Thirty Square Meter boat *"Bacchant,"* reports that the Genoa jib made from Wamsutta Duck, by Cousens & Pratt, has been a large factor in the excellent record made by this boat. All the other sails with the boat came from abroad . . . but the Judge says he will never have a foreign sail again, as his experience with Wamsutta has proved it to be unnecessary.

"BACCHANT" won the Corinthian Yacht Club Championship, Eastern Yacht Club—Boston Yacht Club Mid-Summer Series in 1931.

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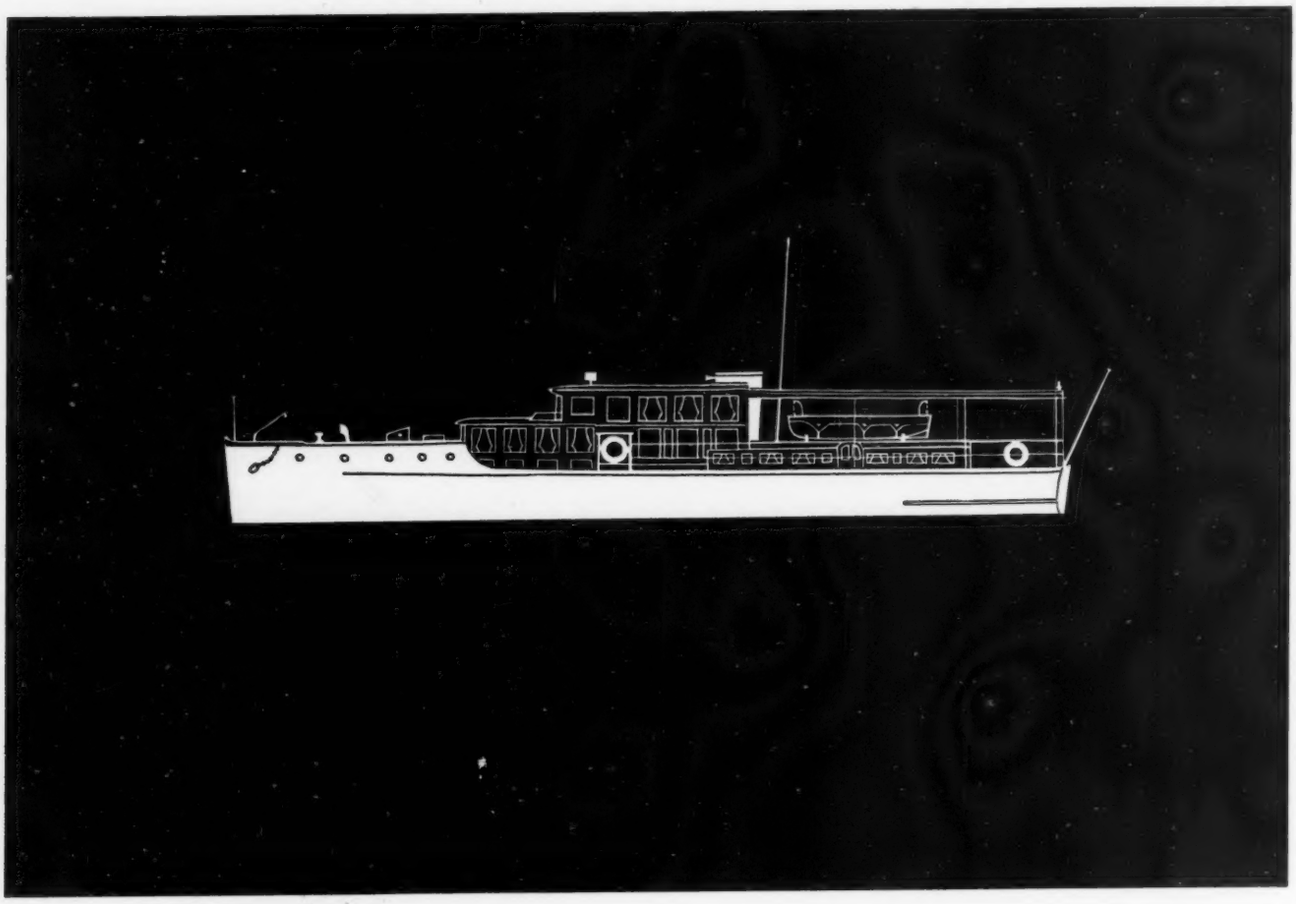
220 Commercial Street, Boston

Sails made from the new Hydropelled Wamsutta Duck have a greatly increased resistance to water and mildew. We shall be glad to give you full information about this exclusive new Wamsutta feature.

"BACCHANT"
Owned by Judge Jesse W. Morton
Wamsutta Jib by Cousens & Pratt

WAMSUTTA YACHT DUCK

Made Water- and Mildew-Resisting by the Hydropelling Process



One of the fine motor yachts built by The American Car and Foundry Company

The Paris Salon Nautique

(*Continued from page 55*)

enhance their popularity with racing-minded skippers.

Turning to motor craft, Despujols displayed two Mediterranean twin-screw cruisers — a 45-footer and a 34-footer of his usual design, with large flaring bows. Both were powered with Chrysler units giving speeds of 28 and 22 miles per hour, respectively. The excellent construction and finish of these boats left nothing to be desired. The engines, which occupied more space than seemed necessary, were installed aft behind a double bulkhead lined with asbestos to damp out vibration and sound, while the tanks were fitted under the central cockpit in order to preserve the trim of the boat. Special waste fuel collectors and breathers were also fitted — improvements worth noting; and on the larger cruiser all fittings were chromium plated.

Chantiers Excelsior showed a V-bottom 40-foot day cruiser powered with Scripps 200 h.p. units; and Jouet of Sartrouville — a firm which has just completed Alain Gerbault's new ship *La Blanche Fille Du Soleil*, a Bermudian cutter based largely on Colin Archer's famous design — a 39-foot twin-screw cruiser with a cockpit and two cabins, as well as a family cruiser, a day boat capable of accommodating 16 people in reasonable comfort.

The smallest cruiser was the Simm's craft, a British product, priced at $1300. Only 20 feet over all and powered with a Thornycroft motor of 10–12 h.p., giving a speed of 8 knots, this boat contained a surprising amount of room and attracted considerable attention. There may well be a future for these tabloid craft on Continental inland waterways.

Amongst speed boats represented were Chris-Craft and Dodge — it is impertinence to comment on their excellence — a French make, the Chauvière, much on the same lines as these two, and the well-known Sea King exhibited by the Power Boat Company.

There were a large number of outboard motors: Johnson, Lockwood, Elto, Evinrude, Soriano, and a new model of French make, the Laros, with a clutch and reverse gear controlled by a small movement of the tiller.

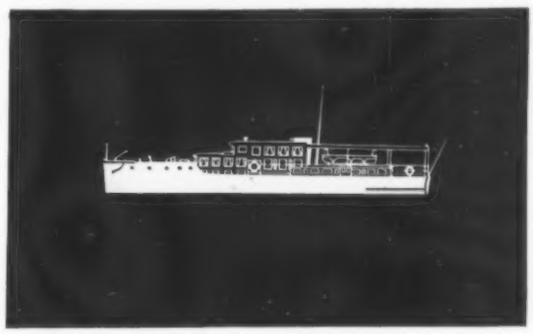
Heavy oil engines were more in evidence than petrol engines, and there were several fine examples, the largest being a four-cylinder two-stroke Bolinders Diesel which develops 450 b.h.p. at 275 r.p.m., and which is controlled by one wheel for starting, reversing, and running speed — a new and striking improvement. A Badouin high speed Diesel of 40 h.p. was exhibited for the first time by a firm famous for their petrol engines, but it was of conventional design. Amongst others, Renault, Deutz, Lister, Petter, and Ruston Hornby attracted a lot of attention. Of petrol engines — Grays, Chrysler, and Scripps were prominent; and Ballot showed a new 30–40 h.p. four-cylinder side valve petrol-oil unit with coil ignition, an exhaust heated vaporiser, and two carburetors so arranged that the change from petrol to gas oil could be made automatically. Whether or not this type of engine will prove a success remains to be seen, as most people dislike a compromise and prefer an engine which operates on one type of fuel. The only petrol-paraffin engine was the Bettus — Loire — a significant reminder of changing trend.

From engines one came to accessories in unlimited number, everything being represented from cooking stoves to fire extinguishers; from life-saving apparatus to rigging screws and shackles. A new type of pressure stove, the Esmé, made definite claims that the flame could be turned dead low for any length of time with perfect vaporization, and an auxiliary — or pilot — burner seemed to be the secret of this improvement, which should prove a great boon to the galley. Usually one cannot let a pressure stove simmer for long, as the burner, unable to retain sufficient heat, soon emits a sooty yellow flame.

Laurent Giles had his usual stand where he displayed several designs, including one of a new 16-ton cutter, an improved *Etain*, with surprising accommodation for her size. This boat should, if she is built, do well in the O. R. C. Channel race, besides being a really fast able ship suitable for cruising and handicap racing. His designs for a 200-ton twin-screw Diesel yacht were an outstanding example of beauty of line and harmony of hull form.

On the banks of the Seine a temporary building housed many of the exhibition motors in action; and moored against the quay was a 55-foot auxiliary steel ketch built by Amsterdam Scheepswerf and powered with a Deutz 25 h.p. Diesel. This yacht was of first-class finish with unusual accommodation, having, instead of a large stateroom abaft the saloon, a double and a single one to starboard and port, respectively, the bunks of the double cabin being placed in tandem. There was also a double stateroom forward of the saloon, to starboard, with superimposed berths. On deck all halliards were of wire, working on winches, even the main sheet being a single wire led through suitable blocks to a deck winch, with the standing part secured to a spring buffer working in oil underneath the boom. I doubt, though, whether this arrangement will prove satisfactory, for the continual jerking to which a main sheet is subjected — especially in deep sea cruising — will probably cause crystallization sooner or later and result in breakage — perhaps at an awkward moment.

Taken as a whole, the salon was a notable show this year, and will do more than any other form of propaganda to foster the sea spirit in France.



This A. C. F. *sixty-eight foot motor yacht has a speed of 17 miles an hour. It accommodates eight persons in great comfort. It costs $58,900.*

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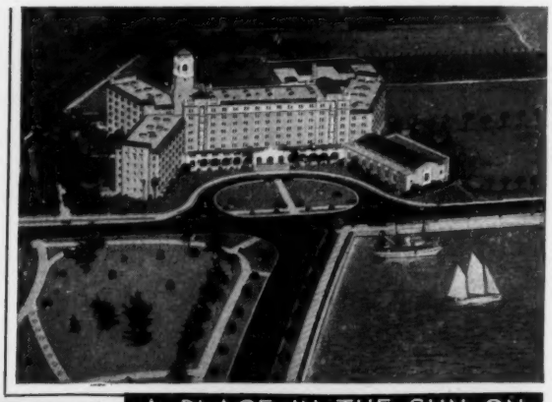

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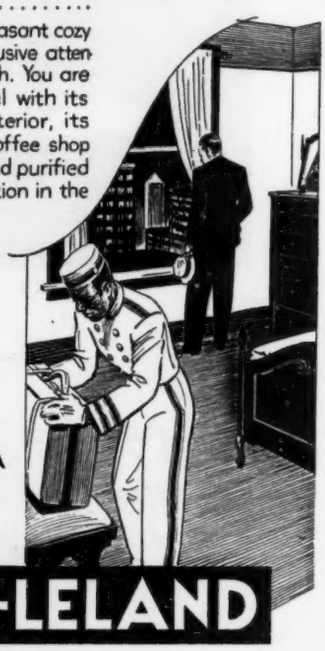

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DETROIT HOTEL DETROIT-LELAND
BAKER-OPERATED

An Episode in the Moonlight

(*Continued from page 74*)

water, and on what, I knew, was an approximately correct compass course.

"Hell! Can't you see it?" I repeated; and at that instant, to the accompaniment of a feeble flicker ahead of us, he cried, "I've got it, I've got it!"

It might have been thought that he had found the Gold of Arabia, and to us his discovery was, at the moment, of far greater value.

"Well, hold it boy — hold it! Don't let it get away from you. How'm I heading?"

"Just a hair to port — "

"How's that?"

"Okeh — fine!"

We held it okeh — fine! Fortune, you must admit, had favored us. That feeble single flash, and the circumstance of the coincidence, at that hour, of the moon's path with the course between the two buoys, had enabled Sam to pick up the dim black shape of the recalcitrant buoy, and with the aid of the powerful binocular lenses, complemented at odd intervals by a lonely blink from the buoy, he conned the ship through that final stretch of turbulent water until we shot past the buoy and into — if I may say so, by comparison — the smooth waters of the open sea.

\+ + +

Starboard Tack

(*Continued from page 50*)

We passed through Buttermilk Channel, and here the wind went back into the southeast and we doused the spinnaker. Though the late afternoon sunshine had cheered us off Bay Ridge, it was now night, and the bridges ahead trajected their luminous pearls far above the black waters of the harbor. A tug, snorting heavily, followed close upon us, but the inertia of its sand-filled barges would not permit its overtaking. We crossed the vivid red and green range lights on the Brooklyn side and brought abaft the beam the sickly light of the Seaman's Mission opposite. Having in mind treacherous indrafts of current toward the piers, I kept well in mid-stream, and here the first eddy caught us as we passed beneath Brooklyn bridge.

This sudden reversal of our ship's head should have warned me. Instead, as I slacked off the main sheet and jibed around, I felt a sense of mastery. We were on our course again, sweeping slowly up the East River, and there was more than wind enough in the puffs pouncing down from Brooklyn to give us steerageway. Unresponsive though *Direction* is to sails or tiller, I derived enormous satisfaction from keeping her on the course, Joe sitting by the headsail sheets and playing them as each sudden occasion required. Where the river, almost empty this Sunday evening, swept over to the Wallabout Basin I edged in to the New York side, and when we came abreast the night lights of the 26th Street station I renounced all thought of anchoring. The current carried us on in all its mid-spring strength, and of the wind, once more fair, I asked nothing better than steerageway.

Pete, crouching beside me, gave warning of the tide dividing on the rocks off Welfare Island, but I had been watching the flashing light and told him that we would clear it nicely. So we did, and as the light flashed abeam to starboard I gave Pete the tiller and turned my torch on the chart spread out on deck beside me. When I took over again fifteen seconds later *Direction* was out of control. It was not Pete's fault. Able sailor though he is, he does not control the winds, and the southerly chose that shift of helmsmen as its moment for passing out.

"MANDALAY"
Designed by John Alden for Frank Vining Smith, built by Casey Boat Building Corp., Fairhaven, Mass. Overall length 38 ft., beam 10 ft. 6 in., draft 6 ft.

"MANDALAY"

Everdur-fastened from stem to stern

Because of their assured dependability, boat fastenings of Everdur—rust-proof, ductile, strong as steel—are preferred by leading naval architects and builders. John Alden of Boston specified them for "Mandalay"... thereby providing extra seaworthiness for this 38′ auxiliary cutter, built at the Casey yards at Fairhaven, Mass.

Everdur in many forms, both wrought and cast, contributes its strength and durability to "Mandalay." Screws and bolts for hull and planking, mast goosenecks, bands and shives... deck hardware, turnbuckles and chain plates... all are made of this tough, unusually corrosion-resistant Anaconda alloy of copper (96%), silicon and manganese. Everdur and other rustless Anaconda metals are superior for many needs in boat construction. Our booklet describing them and their uses may be helpful to you. A copy will be mailed on request. The American Brass Company, General Office: Waterbury, Conn.

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THE SORENO HOTEL
ST. PETERSBURG - FLORIDA

In the darkness I reached for the tiller and found it hard aport. I hauled the mainsail flat and Joe let go the headsail sheets. Fruitless. The tide had control of us and we were driving toward the projecting New York piers. Our eight-foot oars had not been lashed in place since our use of them in Gedney Channel and Pete moved quickly forward with one to paddle our bow around. Joe picked up the other and backed water on our starboard quarter. The tiller still aport, I sat, fascinated by our approach to the pier.

Slowly our head came around to starboard, and we missed collision by several yards. Now we swung away from shore and I brought the tiller amidship, slacking off the main sheet. Still I did not appreciate the folly of my adventure nor the plight in which the failing wind had left us.

"Got by that one," I called to Pete. "Don't pull her around any more."

But on the instant another swirl of the tide set us toward another pier. Pete rowed frantically and did this much: He saved us from crashing bowsprit on. We struck square on the port bow, and in the rebound staggered clear. Joe hauled in the mainsail to keep the boom from swiping the bollards on the pier, and an inebriated person whom it just missed called out, "If yer do that here, whatcha gonna do in Hell Gate?"

That was a question for you.

I had not previously thought of anchoring, and did not then, for what could an anchor do when one is barging into piers? But as we caromed clear a whirlpool caught us, turned us completely around, and started us around again. For the moment our headlong movement was all but arrested, and as our bow swung upstream for the second time I called to Pete, "Let go that anchor, quick!"

Lucky for us the hawser was clear for running. In the few seconds between command and execution the onrushing current had us in charge again. Pete paid out the cable, all but twenty feet of it before the hook ceased bouncing over the rocky bottom. I looked astern. At a distance of a hundred yards I saw a dredge moored to a wharf. Having once written a story about a couple of boys who were sucked under a dredge in Hell Gate when their power failed, I had done considerable thinking about what would happen to a boat under those circumstances. I didn't like the looks of the dredge and turned away.

Ashore in the peaceful content of a windless night, a group of men sat under a bright light playing cards. Between their safety and our jeopardy the black water sucked wickedly. Just abreast I saw the colored lights of the Montauk Yacht Club's 52nd Street station and below them an immense, substantial float, with white fenders invitingly around it.

"She's holding," said Pete, "but I'd better let go the heavy anchor."

"I'll get the key," said I, for the key had been hurriedly made in Philadelphia, was a tight fit, was not galvanized, and I had put it below to keep it from rusting in place. Pete is a fast worker. When I reached him with the key he had chain out on deck and was ready for it.

"The damned thing won't fit," said he.

"It will," I contradicted. "I've already tried it in the slot."

"It won't fit when the anchor is made up."

"Use wire."

"I've got a sail stop —" and Pete lashed the stock in place across the shank. But while he did so I looked ashore again.

"Don't anchor," I exclaimed. "If I put the tiller hard aport we'll veer into the float." I leaped aft, having remembered the action of my old *Hippocampus* in the

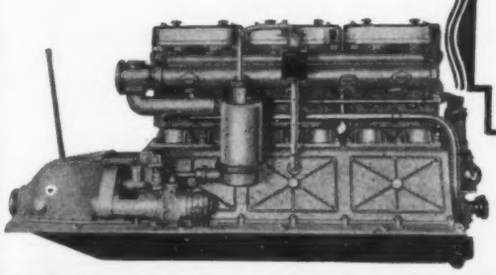
The FIRELANDS leaves the ways

powered with

MURRAY & TREGURTHA
OIL BURNING ENGINES

FIRELANDS, the beautiful, semi-enclosed bridge deck cruiser, designed by Frederick K. Lord for its owner W. H. Millspaugh, slipped down the ways at the Geo. Lawley Plant, Neponset, thereby adding another distinguished member to the growing family of boats powered with the new type, oil-burning engines of Murray & Tregurtha. The FIRELANDS measures 64′ 2″ x 13′ 6″ x 3′ 2″, and on trial runs averaged a speed of 18 M.P.H.

The FIRELANDS is powered with a pair of Murray & Tregurtha Model M-O 6-cylinder engines that develop 130 H.P. at 800 R.P.M. The bore is 6½″, stroke 8″, weight 3,250 lbs. each. Compact, powerful engines, free from vibration, with a clean exhaust.



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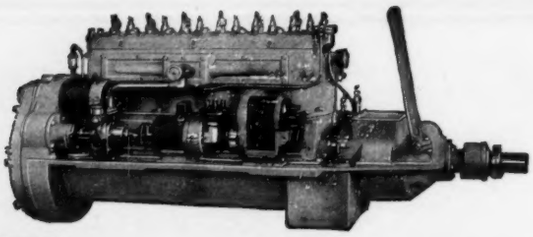

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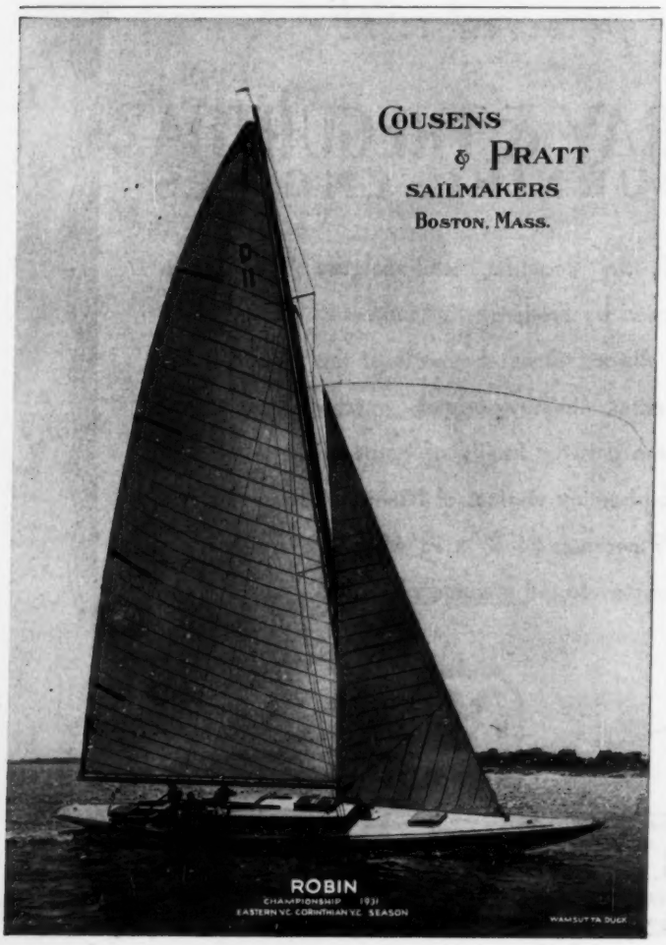

terrific eddies of Gatun locks, and swung the tiller over.

"A heaving line," said Pete, coming aft, and I yanked a coil out of the lazarette. "It's that same god-damned hemp," said Pete, but heaved it nevertheless. By this time we were fifteen feet from the yacht club float. Men standing there scrambled and caught the line. Small though it was it would have held us, but it fouled and there was no time to make it fast. Pete and Joe had to drop the end.

Out into the stream we charged again and now I saw that we were drawing ominously nearer to the dredge. But I had to wait until *Direction* had had her swing before she responded to the ported tiller. Then in we came, faster than I had yet seen the hooker move, and would have struck the float if the slipping anchor had not let us drag below it. The heaving line came back to us and Pete made it fast. In water that was locally almost slack we moved upstream and lay beside the float. Bow and stern lines were got out — and I had another, more contemplative, look at that dredge, looming evilly against the arched lights of Queensborough bridge.

Pete took a strain on the anchor to see if it would hold us off the float and it came home hand over hand. . . .

\+ + +

So we towed through Hell Gate on the morning tide, and filled our sails on the starboard tack near Execution and sailed peacefully down the Sound. As we turned into Cold Spring I remarked that there was almost always a southerly coming out of the harbor and that for once in our voyage of five days we would have to tack. But after a few feints from the south the wind held true in the west and we reached in to our anchorage.

We doused the two jibs and with slack forestaysail and mainsail sheets I swung the cutter into the wind, telling Pete not to anchor until we had gathered sternway. But, heading west, I couldn't find the wind's eye.

"Where the devil is it?" I called to Pete.

"South," said he. "Just shifted."

"Then let go anyway."

I went forward to watch the chain pay out. Pete looked up, grinning.

"If the owner ever wants to rename this packet," said he, "he could call her *Starboard Tack*."

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Ocean Voyages

(*Continued from page 85*)

Two famous round-the-world single-handers are preparing to set sail once again. Alain Gerbault has built a new 34-foot cutter which bears a Polynesian name meaning *The White Daughter of the Sun*. It is said that he is planning to sail her to Polynesia where he will take up his residence as more or less king of a tropical island which he is believed to have purchased. Gerbault has seen a large portion of this world and has decided that the South Sea Islands are the nearest approach to paradise and apparently intends to spend the rest of his life there. The other Blue Water Medal sailor about to weigh anchor is Harry Pidgeon, who for the past five years has moored *Islander* near Port Chester, New York, on the Sound. He has been writing his book and, now that it is finished, he is planning to sail to the Caribbean.

Add to these voyages the ten Transatlantic crossings made in the race this summer and the passage made by the German ketch *Stoertebeker*, and the oceans of the globe are not as devoid of sail as numerous writers have lamented. Although sailing tradition in square-riggers has passed, sailing tradition in small ships bids fair to live long.

There's more of everything in these 30 footers

Berths for four, cockpit space for more than a dozen in the Single Cabin Cruisabout. Speed of 15½ m.p.h. Real value at $3585

The ideal summer home — this Cruisabout with stateroom aft. Speed 15½ m.p.h. Priced at $4185

Individuality in standardized boats is found in this Vee-drive Cruisabout. Cabin complete for four, two cockpits. Speed 18 m.p.h. Price $4385

A yacht with an entirely different arrangement — this Aft Cabin Cruisabout. Large toilet room forward. Complete accommodations aft. Speed 15¼ m.p.h. Price $3985

Whoop her up in the Day Cruisabout at 22 m.p.h. speed. Fitted with toilet room and large cockpit. Price $3685

'Baby" 24½' Richardson is a little boat with a big reputation for speed, accommodations and value. Speed 15½ m.p.h. Price $2400

RICHARDSON CRUISABOUTS have more of everything in their construction and their equipment. More quality lumber, more bronze fastenings, more hours of skilled labor make them the perfect yachts they are.

Aboard, they have more accommodations than you would expect to find in a cruiser as small as thirty feet because every inch of space from stemhead to sternpost is used to advantage.

Chain lockers and water tanks are hidden away under the forward deck in space that would ordinarily be wasted. Cabins are large enough to provide comfortable, cozy accommodations and are equipped with toilet rooms, large, soft, spring filled, upholstered berths and complete, spacious galleys.

The cockpits, protected by windshields and canopy tops, are free from all floor obstructions and large enough to accommodate from 8 to 25 or more people without the slightest vestige of crowding.

More powerful, economically operated Gray motors are standard equipment this year. With refinements in the hull design these add miles to Cruisabouts speeds.

There's more beauty in the exterior appearance and finish. Especially selected, beautifully figured, polished mahogany contrasted to shamrock green decks, is used for the superstructure. Slanting windshields and low, curved canopy tops give racy, express cruiser lines.

And, above all, there are more cabin arrangements — six individual and distinctive models to meet the requirements of the most exacting yachtsmen. Prices are far below the amounts you would expect to pay — values are unsurpassed.

Prove to yourself that there's more of everything in these 30 footers by visiting the Richardson Cruisabout exhibit at the Motor Boat Show, by visiting the dealer nearest you or by sending for Cruisabout booklet "F-32" which may be had without cost or obligation.

RICHARDSON BOAT COMPANY, INC.

361 SWEENEY STREET NORTH TONAWANDA, N. Y.

P.S. Don't forget the "Baby" 24½ Richardson, the biggest little cruiser afloat and, without doubt, a value equal to the Cruisabouts.

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Bruns-Kimball & Co.
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W. H. Moreton Corp.
1043 Commonw'th Ave.

Amityville, L. I.
F. D. Homan
78 Riverside

Detroit, Michigan
Allmand & French, Inc.
6460 E. Jefferson Ave.

Houston, Texas
Peden Company
115 Broadway

Cincinnati, Ohio
J. A. Scarlett
436 E. Second St.

N. Tonawanda, N. Y.
Hill-Manning Boat Corp.
Tonawanda Island

Alton, Illinois
Mississippi Valley Yacht Sales
101 Broadway

Newport News, Va.
C. P. Amory
C. & M. Bank Bldg.

Washington, D. C.
Flood Gate Motor Boat Sales
14th & Water Streets

Rochester, New York
Volney E. Lacy
Charlotte Station

Toronto, Ontario
T. B. F. Benson
205 Yonge Street

Louisville, Ky.
Barret Company
112 S. Second St.

Chicago, Illinois
A. M. Deering
1454 Builders Bldg.

San Francisco, Calif.
Boardman & Flower
1740 Van Ness Avenue

Erie, Pennsylvania
Bender Marine Co.
Foot of State St.

Peoria, Illinois
C. O. Horstman
813 S. Washington

St. Petersburg, Fla.
George W. Hurd
2631 First Avenue, So.

Toledo, Ohio
E. M. Littin
2503 Broadway

Miami, Florida
The Matthews Co.
16 McAllister Arcade

Cleveland, Ohio
N. J. Shea
21376 Endsley Ave.

RICHARDSON CRUISABOUTS

The End of the Rainbow

(*Continued from page 60*)

answers. "I learned a lot of things when I was young and that helps. Do you know this?"

And in a voice vibrant with health and faith:

"'Whenever your zeal is burning low,
And right is hard and easy is wrong,
And you despair at progress slow,
And your old sins are creeping on,
Then for good courage we turn to Thee,
The Carpenter of Galilee.

"'Come forth with us then, Wondrous Guest,
We need Thee in our shop and home,
Thy presence will our steps arrest,
When we shall tempted be to roam,
And everyone in us will see,
The Carpenter of Galilee'."

And be you saint or sinner, believer or unbeliever, that is what you do see in old Solomon Morash working with devotion in his little old shop by the harbor of Lunenburg. One can't live forever. He is in his eighty-seventh year. Go, before it's too late to see and talk with this master craftsman, who as a little child made little boats to play with, and now as an old man is making little boats again that future generations may know the beauty of craft they will never see afloat. His trade, the logical expression of his life's experience, cannot be taught to an apprentice.

Go! Wear a path to his door before it is too late, and see the very incarnation of old Lunenburg.

Recollections of a Windjammer

(*Continued from page 63*)

we came 'round to the wind, fortunately without doing further damage.

All that night she lay hove to, lurching sickeningly, and we expected at any moment to see the sticks go overboard. The next morning the weather commenced to improve. We held the burial service and slid our poor unfortunate Swede over the side. Then, having repaired the gap where our once beautiful teakwood skylight had stood, we resumed our voyage and reached Freemantle without further incident. The trip from Glasgow had taken 102 days.

At that time, a number of luggers were fitting out at Freemantle to go up to the pearl fishing grounds up the coast. Seamen were scarce and they were offering good money for crews. Before we had been in port 24 hours, ten of our seamen had cleared out, leaving only old Murphy and Charlie behind. We lay there three weeks discharging and taking in sand ballast, then received orders to proceed to Newcastle, New South Wales, to load coal. We had great difficulty in getting a crew, and at last picked up only eight scallawags, who refused to sign except as runners, to be paid off in Newcastle. After sailing we put them to work, but they objected, on the grounds that they were runners, for handling the ship only. The Captain pointed out to them that their agreement made no such provision, and that if they refused to work, he would have them arrested on arrival. They decided to work, but took their revenge in an extraordinary manner. We took a fortnight to sail 'round and during that time all manner of things disappeared. The first things to go were two wash tubs. The Captain had had them cut from empty beef casks, and with his own hands had spent the afternoon painting them a beautiful green, with black bands. They were left on the main hatch to dry and the next morning were gone. During the next few days, holystones, brooms, belaying pins, winch handles, the grindstone and many other things mysteriously disappeared and we were at our wit's end to account for it.

On arrival at Newcastle, we dropped anchor in the harbor to wait for a vacant berth. The Captain went ashore, laid his case before the authorities, and that afternoon the runners were taken ashore and given a month's hard labor. A couple of days later, having hired shore labor to assist, we moved alongside the wharf. On going to heave up the anchor we discovered that the long iron levers for working the windlass had gone the way of the wash tubs. Fortunately, we were able to borrow a pair from another ship. We lay in Newcastle about six weeks and with the aid of four able seamen whom we managed to engage, making six men and four apprentices in all, we discharged part of the ballast, then moved the rest from one end of the ship to the other, and so tipped her so that we could scrub the grass and barnacles off her as far under water as possible.

This labor done, we received orders to proceed under the coal tips, where we loaded 2000 tons of coal. Then, having secured a full crew, we set sail for Eten, in Peru. Our crew turned out to be a lot of useless hoboes with several "bad hats" amongst them who stirred up trouble. We had the reputation of being a hungry ship, and this fact, which became more apparent as the voyage lasted, didn't help matters. Then one day, Charlie, our West Indian Negro, ran amok and attempted to stab me in the stomach with a marlin spike. I dodged and jumped to the rail for a belaying pin. Seeing this, Charlie ran aft shouting, with me after him. As he reached the poop ladder, he turned suddenly and flung the marlin spike at me. It caught me in the knee, brought me down, and I bear the scar to this day. The shouting brought the Captain and Mate up from dinner, and seeing Charlie frothing at the mouth, they locked him up. In a few days he had become normal again and was released, but he was a dangerous character to have about and we got rid of him in Eten.

It took us 82 days to reach Eten, which turned out to be a small open bay with a short pier for loading or discharging lighters. We lay at anchor about a mile off the pier and discharged our coal into lighters holding about twenty tons each. It was a slow, laborious process, for the coal had to be shovelled into bags, roughly sewn up, then hove up out of the hold by a hand-worked dolly winch, and lowered into the lighter, one bag at a time. At least a couple of days a week were feast or Saint days, when the lighter men refused to work, and seven or eight days each month were surf days, when a great tumbling swell would come rolling in and make it impossible to work.

After about three days of this work, six of our sailors refused duty and demanded to be taken ashore to lay their grievances before the British Consul. The Captain tried to satisfy them by promising better food, and a "tot" of grog daily, but they would have none of it. The fact was that they were fed up with work, and there was nothing to do but take them ashore, which the Captain did, only to find that the nearest British Consul was at a town about sixty miles inland. Embarking on the ramshackle railway, they arrived there only to discover that the Consul was away for the day. The men now demanded money to enable them to get lodging for the night, and it was arranged for them to be at the Consul's office next morning. With a dollar apiece, they immediately got drunk, and as they failed to appear the next day the Captain returned to the ship, thankful to be rid of them.

Have Confidence *in* Your Yacht Engines

"THOSE are great engines. They've never failed me in anything I've called on them to do!"

This feeling of enthusiastic confidence in his Cooper-Bessemer yacht engines was recently expressed by one of the leading automotive engineers of the country.

Every yacht owner should have the same complete confidence in both his main and auxiliary power plants.

And every yacht owner can, if he chooses diesel engines of Cooper-Bessemer make.

THE COOPER-BESSEMER CORPORATION

GENERAL DIESEL SALES OFFICES: SUITE 301, 25 W. 43rd ST., NEW YORK CITY

PLANTS: MOUNT VERNON, OHIO GROVE CITY, PA.

The distinctive Torino III, owned by Theodore C. Hollander, and powered with two Cooper-Bessemer 550 H. P. main Diesel engines and a pair of 50 K. W. generating sets was designed by Henry J. Gielow, Inc. and built by Bath Iron works. Torino III is 155' long, with a beam of 26' and a draft of 9'.

COOPER-BESSEMER

With our reduced crew it took us ten weeks to discharge the coal and take in stone ballast. During this time the Captain did his best to improve the food, but the only things obtainable ashore were sweet potatoes, pumpkins and fresh meat, all of very poor quality. For grog we got the local fire-water, known as "anisoa," which tasted like gasoline and vodka. This was served out at 4:00 P.M. daily, just a small "tot," but it served to keep us going till knock-off time at six.

A few days before finishing, we received six new sailors who came up by steamer from Callao. Beachcombers and dead beats as they were, it was a welcome sight to see some new faces and hear a little news of the outside world. I should have said that we were the only ship at Eten, except for the occasional call of a coasting steamer. On the last day I went ashore in the boat with the apprentices to bring off the Captain, who had been getting his clearance papers. At the pier was Charlie, a mere ghost of his former self, dressed in filthy rags, and very eager to be taken aboard. He had left his mates at the copper mines, and walked back to the coast, hoping to get a ship. When the Captain arrived at the pier Charlie put in his plea, and attempted to get in the boat, but remembering his previous conduct we had no mercy and bundled him roughly ashore. As we pushed off, he pelted us with lumps of coal, and stood on the end of the pier, raging and cursing, till we were out of earshot.

Taking advantage of a fair wind, we hove up anchor and set sail down the coast for Talcahuano, where we were to load nitrate for the United Kingdom. We arrived there on the fourteenth day and came to anchor in the busy harbor. By now I had developed into a fairly useful Second Mate and was mildly tolerated by the Captain, who, however, never wholly forgave me for being so young. Our crew seemed to have settled down, and the feeling uppermost in everyone's mind was to get the ship loaded and home. We lost only one of the crew in this place, and that was the old cook who had been with us since leaving Glasgow. As a cook he was a complete failure, but there was very little to cook, so it didn't matter very much. The cabin boy took over the cooking for a few days, till we managed to secure another cook who had just been discharged from hospital. He was a tall, raw-boned, uncouth Liverpool Irishman, and besides being a bad cook he turned out to be half-witted. He couldn't boil hot water for a barber's shop, and his reply to all complaints was an unholy grin. Unfortunately, we didn't discover all his bad points before getting to sea, so we had to make the best of him.

When the ship was finally loaded we sailed from Talcahuano for Falmouth, for orders. The passage took 135 days. We were never a fast sailing ship under the best of circumstances, and the accumulation of grass and barnacles we had acquired during our long stays in Eten and Talcahuano, did not help matters. We encountered very severe weather off Cape Horn and were driven 'way south amongst icebergs, which caused us a good deal of anxiety during the long, dirty nights. Towards the end of the trip we had the misfortune to lose the cabin boy overboard. He was a Glasgow boy, about sixteen years of age, making his first voyage to sea, and known to everyone as Jock. His loss was a great blow to me, for he occupied the lower bunk in my cabin and had been a wonderfully cheery companion. Although a cabin boy, his great ambition was to be a sailor, and when his duties permitted he was allowed to go aloft in fine weather. On this particular afternoon, Jock had asked permission to go aloft, and the Mate told him to go up and overhaul the main topgallant buntlines. It was a glorious day and the ship making about four knots in a light breeze. Jock sprang into the rigging and made his way aloft, whistling and singing with joy at being given a sailor's job to do. No one paid any attention to him, but a few moments later, there was a cry and a splash, and Jock was seen floating along the weather side. The helmsman threw a buoy close to him, but he seemed to be unconscious and made no effort to reach it. We backed the main yards, and practically threw the dinghy over in our frantic haste, but on reaching the buoy, Jock had vanished.

We hung around the spot for some time, hoping desperately that by some miracle he would reappear; then, very reluctantly, we hoisted the dinghy and resumed our voyage. When we arrived at Falmouth there were several letters for poor Jock, and at the Captain's request, I undertook the melancholy duty of writing to his parents. Amongst his scanty effects I had come across a small cheap book in which he had endeavored to keep a diary of the voyage. In this he had made frequent reference to "his friend the second mate," and I found that he had developed a great regard for me, which made my duty even more sad. I sent this off along with a few other odds and ends that I thought his parents might like to have, and in due course I received a letter of thanks in reply.

We lay in Falmouth ten days, then received orders to proceed to Middlesborough, to discharge. After fourteen days of battling with head winds we made that port and were paid off. Before leaving the ship I went to the Captain and asked for my reference. He had it already written out, and on giving it to me said, "Well, my lad, you stuck it out good, and I'm just beginning to like you. I wish you every success. Goodby." A few weeks later I passed my First Mate's examination and was on the lookout for a job again. But that's another story.

About Those Motor Boats

(*Continued from page 83*)

is made up of 187 clubs, with 18 of them in the Detroit Middle Western section, 26 on the Pacific Coast, 17 in the South, four in Canada, one in Alaska, and 121 in the East, including New England. The large number of Eastern clubs is, of course, due to the greater number of protected waterways along the Atlantic seaboard and the consequent greater development of yachting. On the other point, the Detroit writer is so wrong as to be funny. Nobody in New York has the slightest desire to get the Harmsworth Race there, nor would they know what to do with it if it arrived unexpectedly.

Radical changes in A. P. B. A. management and operation were made at the first meeting under the new president, George H. Townsend, with his Council, which forms the executive body of the association of about 28,000 yachtsmen. On the application of five far-western racing organizations, a new branch was added to the association. This will be known as the Northern California Section. The organizations inaugurating this new group are the Outboard Motor Association of Northern California, Oakland Yacht Club, Lucerne Yacht Club, Central California Outboard Motor Boat Association, and Stockton Yacht Club. The officers elected by the new section are: C. Willard Evans, president; John W. Hodge, vice-president; E. G. Petherick, secretary-treasurer.

The Council voted to appoint three experienced A. P. B. A. officials in each of the sections who will be available to conduct regattas for various clubs for a moderate fee to the association. These new groups of officials will be carefully selected by the Council and named at a future meeting.

For the first time in the history of the A. P. B. A., newspaper men were invited to a Council meeting.

YOUR 1932 CRUISER IS HERE!

Select her from this finer, faster fleet of WHEELER PLAYMATES

23 Feet to 70 Feet— $1,975 to $49,500 . . . a Quality Boat for Every Cruising Requirement

Sturdier, stronger, and more seaworthy — with many convenient appointments not found on other stock boats — at values never before equaled by ourselves nor approached by others . . . WHEELER "PLAYMATE" Cruisers for 1932 are outstanding in everything desired by the most experienced and exacting yachtsman and yachtswoman. Everything from a 23′ Fisherman to a 70′ ocean going yacht.

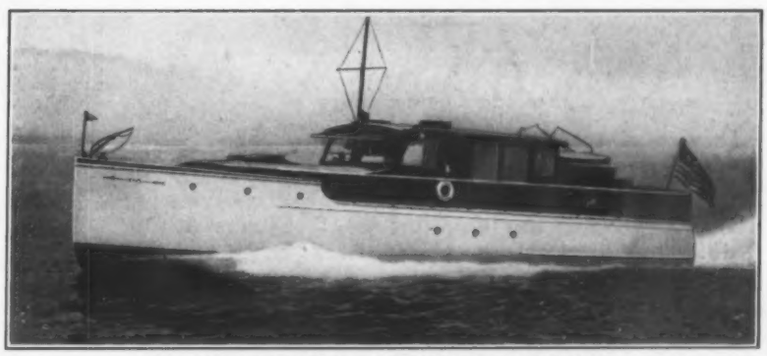
Inspect the new WHEELER "PLAYMATE" Cruisers at the New York Motor Boat Show, Jan. 22–30, especially the 50′ Winton Diesel powered cruiser that makes 12½ miles per hour at only 45 cents an hour; and the 38′ Combination Sedan that contains many exclusive features.

Standard Diesel powered cruisers in sizes 41′, 46′, 50′, 60′ and 70′

Whether you can get to the Show or not, send for new catalog B

28–FOOT STANDARD "PLAYMATE"

38–FOOT COMBINATION SEDAN



50–FOOT DIESEL POWERED CRUISER

WHEELER SHIPYARD, INC.

Foot Cropsey Avenue Brooklyn, N. Y.

They took a deep interest in the proceedings and made many valuable suggestions. As reported here last month, the A. P. B. A. has adopted three new individual and commercial organization memberships ranging from $10 to $100 per year.

C. F. Chapman was again named secretary of the Racing Commission. Commodore Harry A. Jackson, vice-president of the A. P. B. A. and a member of many of its important committees, recommended sweeping changes in all but one of the committees and the elimination of non-working members, whom he termed "wax works." When the meeting ended there was only one committee that had not been ripped apart. This was the Racing Commission with Commodore Harry B. Greening as chairman.

The Rules Committee, because it has not functioned and because most of the rules are made by the Racing Commission and the Council, was eliminated. Some committees were named on the spot by the elected chairmen. Others were provided only with chairmen who are to select their own personnel. In other words, the A. P. B. A. is developing a new burst of speed with all sixteen cylinders reground and working in harmony.

The meeting was so lengthy and so full of rather revolutionary accomplishments that the Harmsworth Trophy controversy was touched upon only briefly by the various speakers. This correspondent's efforts to straighten out the international racing tangle were backed up by the association in the following statement by President Townsend:

"My talks with the European racing men have convinced me that they are anxious to have more of our drivers take part in their regattas and I know that many of them are hoping to compete in this country. We shall try to get some of them over here this coming summer. I feel that we should continue vigorously our present activities toward maintaining the A. P. B. A. as the national authority in American motor boat racing and toward its universal acceptance as such in the International Motor Yachting Union and other councils controlling foreign motor boat events, with the exception of the British International (Harmsworth) Trophy, the rules for which were established in 1903 by the original deed of gift of the late Lord Northcliffe. The Harmsworth Race has never been under A. P. B. A. rules or management, although the A. P. B. A. will always be glad to coöperate if it can be of service.

"We must, by all means, continue without interruption the efforts already instituted by the Association for a greater harmony in the matter of international and world's records."

The Stars Come of Age

(*Continued from page 76*)

Bedford, Massachusetts; and Lake Cayuga, New York.

Seven races will be held for the Stars at the Olympics, the dates of which are tentatively set for August 5th to 12th. The official rules of the N. A. Y. R. U. and the I. S. C. Y. R. A. will prevail and measurement certificates of the Star Class will be the criteria of the eligibility of the boat. Definite entries must be filed not later than July 22nd. Contrary to the rules used in the Star Internationals, the Olympic Committee insists that both skippers and crews be citizens of the country they represent. Moreover, if naturalized, they must never have represented any other nation in Olympic competition. The contests will be held in the inner harbor, inside the San Pedro breakwater. As a result of the dissatisfaction expressed over the scoring system used in the 1928 yachting events on the Zuider Zee, the point system has apparently been changed to the standard in the N. A. Y. R. U. I understand that the European nations favor going back to the first, second or third place system, in which a place in any of the first four races qualifies a boat for the two-race finals, but at this writing the point for finishing and point-for-every-boat-you-beat system still rules.

When William Gardner designed the first Star in 1910 and George Corry, A. B. Alley, F. S. Richards, R. G. Browne and H. K. Landis sailed their old gaff-rigged craft in the first race for Stars at the Harlem Yacht Club Regatta on Decoration Day, 1911, they little realized the importance of their venture. Practically all the expansion has occurred within the past decade, since the adoption of the Marconi rig. One-design class racing has ever confronted the difficulty of retaining interest as the march of naval architecture has tended to improve hull and sail design. The success of the Stars has been due as much to the adaptation of the rig to the times as it has been to the relatively small expense involved. In the twenty-one years of the history of the class the rig has gone through two changes, the first abolishing the gaff rig in favor of the Marconi, and the second, bringing the sail plan inboard and heightening the mast at the expense of the boom. Each move has increased the popularity of the boat, the hull of which, admittedly not perfect, is still exactly as William Gardner created it in 1910.

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Although but a few months remain before actual competition begins, there is still time for individuals to join a fleet or for a group of yachtsmen to form a fleet of Stars to participate in at least the elimination series for the Olympics. That those who read may act there is appended herewith a list of officials of the International Star Class Yacht Racing Association for 1932, any of whom will be glad to assist those interested.

Commodore — George A. Corry, Port Washington, L. I.
President — George W. Elder, 105 West 55th St., New York City
Vice-President — Enrique Conill, 9–11 Rue Neuve de Villiers, Levallois-Perret, Seine, France
Treasurer — H. M. Worcester, 220 Stock Exchange Bldg., Los Angeles, Calif.
International-Secretary — T. D. Parkman, 38 Park Row, New York City

District Secretaries

L. M. Bainbridge, 100 Broadway, New York City; Atlantic Coast, North of New York City
C. H. Reeves, 1315 Cathedral St., Baltimore, Md.; Atlantic Coast, South of New York City
D. S. Wuescher, 1631 Octavia St., New Orleans, La.; Gulf of Mexico, Central America
F. R. Weisgerber, 28 East Larned St., Detroit, Mich.; Lakes of North America
Winsor Soule, 116 E. Sola St., Santa Barbara, Calif.; Pacific Coast
H. E. Wylie, 1712 Alma Road, Vancouver, B. C.; Pacific Coast, Canada, Alaska
Rafael Posso, Union Club, Havana, Cuba; Cuba, West Indies, South America
H. M. Dowsett, P. O. Box 2600, Honolulu, T. H.; Hawaii
Gerard de Piolenc, 53 Rue Chateaudun, Paris, France; Northern Europe, including British Isles
Fernan Conill, Villa Montjoli, Cannes, France; Southern Europe
J. C. Rockwell, °/₀ Manila Electric Co., Manila, Philippine Islands
Sampson Smith, 131 Varick St., New York City; New York Lakes, from Ontario East
Eric Aakerlund, Stockholm-Tidningens A:B, Stockholm, Sweden

Rules Committee — George Elder, 105 West 55 St., New York City
Development Committee — Charles E. Lucke, Jr., 845 West End Ave., New York City
Measurement Committee — J. F. Watkins, 47 Manhattan Ave., Bridgeport, Conn.
Technical Advisory Committee — Francis Sweisguth, 41 East 42 St., New York City

Forty Years of Motor Boat Development

(*Continued from page 102*)

the attention to detail, and its reliability, the model is now in the sixteenth year of its development, and still, perhaps, leads the Elco Fleet in its hold upon the public.

This first Cruisette of 1914 was a double cabin model with the engine aft, under a small cabin trunk, under which compartment were also two extra berths. The Cruisette was redesigned in 1920 as a single cabin boat, the basic design of all succeeding Cruisettes, and the size crept up to 35 feet in length. Also in that year, the Elco Fleet was enlarged to include cruisers up to 62 feet in length. From the introduction of that 1920 fleet, up to the present fleet of 1932 models, Elco has continued, without interruption, to build what is, perhaps, the most extensive line of standardized cruisers offered by any one builder in the world.

The complete story of the step-by-step development of Elco cruisers is too long for a single article, but a survey of the long line of Elco models being built today convinces one of the vision and foresight of those who have guided the organization through the forty years of its existence.

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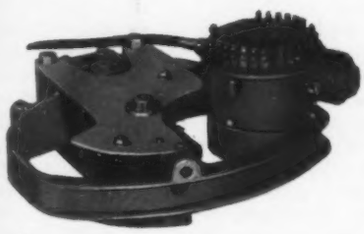
Automatic Steering

E. S. RITCHIE & SONS, and the Automatic Compass Corporation will exhibit the newest development in automatic steering devices for yachts both large and small. The inventor, Bradford B. Holmes, a pioneer in this field whose automatic steering geer has been seen at



previous shows, has made improvements on the steering mechanism by employing a quadrant steerer, a radically new method of applying the rudder.

A standard liquid compass is fitted with a contacting head sensitive to changes in direction and equipped with electrical contacts which energize the impulses which actuate the rudder. The steering mechanism is built in a quadrant designed to take steering cables leading to the wheel for hand steering so that the boat may be taken in hand at any moment, yet without shutting off the automatic control.

Once installed, the Impulse Steering gear relieves you of the chore of hand steering. The compass head is merely set on the desired course and your time may be devoted to more interesting work about the boat.

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